ENVIRONMENTAL-DOCUMENTS

COUNTY OF SAN DIEGO

INTER-DEPARTMENTAL CORRESPONDENCE

DATE November 2, 1976

TO: Planning Commission
Board of Supervisors

FROM: Environmental Review Board

SUBJECT: Environmental Impact Report for Poway Woods, TM3503, Log #76-13-28

The Environmental Review Board (ERB) has reviewed the enclosed Environmental Impact Report (EIR). Based on the discussion of the issues that follow, the ERB recommends that:

1. The EIR be certified as being complete and in compliance with the provisions of the California Environmental Quality Act.

2. It be found that the project as proposed will have significant circulation, biology and air quality impacts. Soil instability and schools will have insignificant impacts. This project will have a significant but potentially mitigatible sewage impact. Noise impacts would be significant but partially mitigatible.

3. The attached Mitigating Measures be made a condition of project approval.

ERB Deliberations

On motion of Mr. Evans, seconded by Mr. Erickson, the enclosed EIR is approved as being complete and in compliance with the provisions of the California Environmental Quality Act. Vote: 6/0 Manganelli absent

On motion of Mr. Evans, seconded by Mr. Buckner, circulation would have a significant environmental impact. Vote: 6/0 Manganelli absent

On motion of Mr. Buckner, seconded by Mr. Evans, schools will have an insignificant environmental impact. Vote: 5/1 Schell opposed, Manganelli absent

On motion of Mr. Alberson, seconded by Mr. Schell, sewage impacts would be significant, but potentially mitigatible if additional capacity is granted to the Pomerado County Water District by the City of San Diego. Vote: 6/0 Manganelli absent

On motion of Mr. Hurlburt seconded by Mr. Evans, soil instability would have an insignificant environmental impact. Vote: 6/0 Manganelli absent

On motion of Mr. Evans, seconded by Mr. Alberson, the project would have a significant impact on biology. Vote: 5/1 Hurlburt opposed; Manganelli absent

On motion of Mr. Schell seconded by Mr. Erickson, noise would be insignificant environmental impact. Vote: 5/1 Buckner opposed, Manganelli absent

On motion of Mr. Evans, seconded by Mr. Schell, the air quality would have a significant environmental impact. Vote: 5/1 Buckner opposed, Manganelli absent. Buckner's opposition to a significant air quality finding is because he felt it was an issue, but not significant in and of itself. He felt it contributed incrementally to a significant regional problem.

Respectfully submitted,

Sonja P. Itson

for DAVID C. NIELSEN, Secretary
Environmental Review Board

DCN:JBG:sb

Enclosures:
A. Environmental Impact Report Discussion
B. Draft Environmental Impact Report prepared by Grabhorn Engineering Corp., 7364 El Cajon Boulevard, Suite 206, San Diego, CA 92115, for San Marcos Development Company, 1140 Union Street, Suite 111, San Diego, CA 92101
C. Draft EIR appendix prepared by Grabhorn Engineering Co.
D. Initial Growth Policy Matrix
E. Mitigating Measures
F. Response to Public Comments
G. Other Agency letters
H. Letters from the public
I. Figure delineating noise attenuating wall

cc: Grabhorn Engineering Corp.
San Marcos Development Co.
Steve McGill, LUER
Sue Krause, IPO

ENCLOSURE A

Environmental Impact Report Discussion

PROJECT: Poway Woods, TM3503, Log #76-13-28

Project Description

The proposed project consists of subdividing 48.8 acres into 113 single family lots. The project site is located approximately two miles north of Poway Road, just west of Pomerado Road in Poway (Supv. Dist. V).

Existing zoning for the property southwesterly of the proposed Camino del Norte (SA 680) is R-1 (1 DU/10,000 square feet). The Poway Community Plan designation for this area is Low (PRD) (1 DU/6,000 square feet - 10,000 square feet). Approximately 7 acres of the project east and north of SA 680 are zoned R-1 (1 DU/10,000 square feet). The remaining 10.2 acres are zoned E-1-A (1 DU/1/2 acre). The Poway Community Plan designates this northeasterly portion as Estate (1 DU/acre).

Major Issues

1. Circulation (See Mitigating Measure #1.)

   I-15 Corridor - Traffic generated by this project will contribute incrementally to the significant long-range I-15 transportation corridor problem. Currently, Cal Trans is expanding I-15 to four lanes in each direction from Miramar Road to just north of Poway Road. This highway improvement project includes construction of a new interchange at Poway Road. Additional completed, under construction, and proposed improvement projects within the I-15 corridor are shown on Table I.

   However, according to the City of San Diego's I-15 Task Force Report, there are significant long-term transportation problems in this corridor. The widened I-15 eight lanes minimum could be overtaxed during peak periods with only 50% of the communities within the corridor developed. It appears that this problem will not be experienced until well into the 1980's.

   It should be noted that, in the opinion of the CPO staff, I-15 has sufficient capacity to accommodate total travel demand.

TABLE I

I-15 Improvement Projects		Status	Projected Dates
1.	Expansion to 6 lanes of I-15 between Murphy Canyon and Miramar/Pomerado Interchange	Recently Completed	---
2.	Extension of Miramar Road to I-805	Recently Completed	---
3.	Extension of Black Mountain Road from Mira Mesa Boulevard to Miramar Road	Recently Completed	---
4.	Widening of Miramar Road between I-15 and Carroll Canyon Road; and reconstruction and widening of Miramar Road bridge overcrossing	Recently Completed	---
5.	Connection of Camino Ruiz between Mira Mesa Boulevard and Miramar Road	Recently Completed	---
6.	Widening final segment of Miramar Road	Under Construction	Estimated Completion: 1976
7.	Extension of Mira Mesa Boulevard to I-805	Under Construction	---
8.	Upgrading I-15 to full interstate standards Pomerado Road to north of Poway Road	Under Construction	Scheduled Completion: 1978
9.	Widening of Route 163 from Murphy Canyon Road Interchange to Clairemont Mesa Boulevard	In Cal Trans FY 76-77 Budget	Advertised within next year
10.	Construction of 2-lane roadway from Bernardo Center Drive to Pomerado Road with provision of an interchange at I-15	Proposed requiring action by San Diego City, County, & Cal Trans	---
11.	Improvement Poway Road/I-15 Interchange	Under Construction	Scheduled Completion: mid-1976

(Table I continued on following page.)

TABLE I (Continued)

I-15 Improvement Projects	Status	Projected Dates
12. Upgrading I-15 to full standards Murphy Canyon Road to Miramar Road	Not Funded	FY 81/82
13. Upgrading I-15 to full standards Poway Road to Carmel Mountain Road	Not Funded	FY 77/78
14. Upgrading I-15 to full standards Carmel Mountain Road to Lake Hodges Bridge	Not Funded	FY 77/78
15. Upgrading I-15 to full standards Lake Hodges Bridge to Route 78	Under Construction	Completion: early 1977

Local Circulation - Traffic generated by this project will contribute incremental adverse impacts to local circulation. The proposed project will add 1,400 ADT to existing traffic. The Poway Road I-15 Interchange improvement is expected to be completed by 1977 which will add 400-500 vehicles to its present capacity. Cumulative effects of this project and other development in Poway could result in extensive traffic congestion.

A total of 3,331 ADT will be generated from Poway area projects in the final stages of processing by the Environmental Analysis Division. These projects are currently out for public review, scheduled to be reviewed by the Environmental Review Board, or have been recently heard by the Environmental Review Board. These projects include: Flair Poway, Unit No. 2, 480 ADT; Padre Woods, 680 ADT; Casa Real Poway, Unit No. 8, 400 ADT; and Rayo del Sol, 371 ADT.

The Circulation Element of the San Diego County General Plan indicates that portions of future freeway SA 680 cross the subject property. The developer has proposed to provide a 126 foot right-of-way along the portion of SA 680 which crosses the subject property. The Department of Transportation has requested the Integrated Planning Office to designate the portion of Route SA 680 from I-15 to Route SR 56 as Prime Arterial. The Circulation Element must be revised to reflect this change. Other projects along SA 680 not consistent with the San Diego General Plan include but are not limited to: Casa Real Unit #7, Pomerado Ridge and Heritage Hills.

The Regional Transportation Plan as adopted by the Comprehensive Planning Organization in March, 1975, shows portions of SA 680 to be an expressway in 1985 and a freeway extension of State Route 125

in 1995. The 1995 ADT projected for this freeway is 60,000 ADT. However, funds are currently unvaailable to purchase freeway right-of-way or to construct SA 680. Future funding of this route is also indefinite at this time.

In recent action by the City of San Diego, the Council on April 21, 1976, adopted Resolution Number 215805, which directs the City Manager to place the SA 680 project in the Capital Improvement Program for Fiscal Year 1979. If budgeted and constructed, the improvement would provide a connecti-n from I-15 easterly to the City/County line to Pomerado Road. Currently, the San Diego County Needs List for Select System Projects exceeding $20,000 construction cost does not include improvement of this portion of SA 680.

2. Schools

The Poway Unified Schools serving the proposed project will be over capacity by the 1977-78 school year. The following table includes current and projected enrollment and anticipated capacity for schools serving the proposed project:

School	Projected Enrollment	Current Enrollment	Capacity
Pomerado Elementary	664	580	664
Meadowbrook Middle	1,225	1,150	1,200
Mount Carmel High	2,300	1,980	2,200

The proposed Poway Woods project will generate 120 students to attend the Poway Unified School District. The following is a breakdown of school-age children generated by this project:

Grades	Students
K-5	84
6-8	18
9-12	18

Cumulative effects of this project and other development in Poway could cause further overcrowding of the Poway Unified School District. A total of 273 students could be generated to Poway Unified Schools from Poway area projects in the final stages of processing by the Environmental Analysis Division. These projects include: Padre Woods, 62 students; Flair Poway, Unit No. 2, 43 students; Casa Real Poway, Unit No. 8, 48 students; and Rayo del Sol is not expected to generate any students.

3. Sewage (See Mitigation Measure #2)

The proposed project lies within the area served by the Pomerado County Water District (PCWD) and will generate 34,650 gallons of liquid waste per day. The effluent is transmitted from the PCWD to the San Diego Metropolitan Sewer Agency (SDMSA) Point Loma Treatment Plant for treatment before it is discharged trhough the Point Loma outfall. An agreement between PCWD and SDMSA provides for a 4.0 MGD capacity allocation, but currently assigns an initial increment of 2.0 MGD. Existing development and currently approved projects in the Poway area would exceed the 2.0 MGD allocation. The PCWD has requested the assignment of the balance of tis 4.0 MGD allocation, but no decision has been made to date on this request by the SDMSA.

Additional Poway area projects both approved and proposed are contained in Table II. Poway projects in the final stages of processing by the Environmental Analysis Division could generate 97,223 gallons of liquid waste per day. These projects include: Flair Poway, Unit No. 2, 12,600 gallons/day; Padre Woods, 14,763 gallons/day; and Rayo del Sol, 35,210 gallons/ day.

4. Soil Instability (See Mitigating Measure #3)

The proposed project may experience soil instability due to soils encountered on site. Above the elevation of approximately 685 feet, siltstones exist consisting of cemented, highly fractured sandy silts with caliche in the fractures. Between the approximate elevation of 610 and 685 feet conglomerates are encountered. This material consists of clayey gravels and is highly expansive. Below the elevation of approximately 610 feet, mudstones consisting of sandy, clayey silts exist. Slope stability problems are anticipated for slopes in this material over 10 feet in height. Topsoils consisting of loose expansive clay were found over the side slopes of the property.

Both the siltstones and the mudstone formations have potential for slope instability. However, it should be noted that ancient landslide problems experienced by Pomerado Ridge have not been identified on the Poway Woods property.

5. Biology

One plant species, Freocactus viridescens, identified on-site and subject to impact from the proposed project, is being considered for inclusion under the Federal endangered species status. Two other plant species, Selaginella cinerascens and Dudleya variegata were found on the subject property and are considered rare but not endangered.

Project	Number of Units	Ultimate Effluent Generated	Stage of Development	Sewer Service Provided by	Present Utilization	Capacity	Ultimate Treatment	Present Utilization	Capaci
Stoneridge East	331	92,680 gpd	Proposed LSP	Rancho Bernardo	135,000 gpd	600,000 gpd	Escondido	5 mgd	11 mg
SUBTOTAL	331	92,680	to be discharged through San Elijo Outfall						
Heritage Hills #8	45	12,600 gpd	proposed PRD	Pomerado County Water Dist. (PCWD)	.006 mgd	2 mgd	Pt. Loma San Diego Metro	108 - 120 mgd	120 mg
Casa Real Poway Mesa	32	8,960 gpd	proposed TM	PCWD	.004 mgd	2 mgd	Metro	108 - 120 mgd	120 mg
Casa Real Poway Unit #7	68	19,000 gpd	proposed TM	PCWD	.009 mgd	2 mgd	Metro	108 - 120 mgd	120 mg
Casa Real Poway Unit #8	48	13,440 gpd	proposed TM	PCWD	.006 mgd	2 mgd	Metro	108 - 120 mgd	120 mg
Holiday Estates	56	15,680 gpd	approved TM	PCWD	.007 mgd	2 mgd	Metro	108 - 120 mgd	120 mg
C.R. Smith	193	54,040 gpd	approved SUP (apartments)	PCWD	.027 mgd	2 mgd	Metro	108- 120 mgd	120 mg
Pomerado Ridge	1975	553,000 gpd	proposed LSP	PCWD	.276 mgd	2 mgd	Metro	108 - 120 mgd	120 mg
Poway Woods	114	31,920 gpd	proposed TM	PCWD	.015 mgd	2 mgd	Metro	108 - 120 mgd	120 mg
SUBTOTAL	2531	708,640	to be discharged through Point Loma Outfall						
TOTAL	2862	801,320			.352 mgd				

Selaginella cinerascens A.A. Eat.

Spike Moss; Little Club-moss (common names for the genus, Munz, 1974); Mesa Clubmoss; Pigmy or Gray Selaginella (Higgins, 1949)

This species is known from northern Baja California adjacent to the United States, and within the United States, only from San Diego County: on mesas, north to the Poway and Del Dios areas, and inland to Proctor Valley and Otay mountain (Higgins, 1949). As of 1974, this species is considered to be rare, of limited distribution, but distributed widely enough that the potential of extinction or extirpation is considered to be low. Its population vigor as a species is not known, and its general distribution is only poorly known.

Dudleya variegata (Wats.) Moran

Variegated dudleya

This species is known from northern Baja California as a rare species, and within the United States, only from the County of San Diego: from the coastal areas east to the Jamul mountains and Alpine; and north to the Rancho Santa Fe area. This species is considered to be of declining population vigor, rare, of limited distribution, but as of 1974, distributed widely enough that the potential for extinction or extirpation is apparently low. This species is presently under consideration for a Threatened species status by the U.S. Department of the Interior.

Ferocactus viridescens (T&G) Britton & Rose

San Diego Barrel Cactus

This species is known from northwestern Baja California, and within the United States, only from San Diego County (to as far north as Del Mar and east to Poway and Otay Mesa). This species is considered to be totally endangered within the United States, of declining population vigor, but distributed widely enough that the potential for extinction, as of 1974 (CNPS) is low. This species is presently under consideration for an endangered species status by the U.S. Department of the Interior.

6. Noise (see mitigation measure #4)

Based on existing ADT of 8,500 for Pomerado Road, the L_{dn} 65 dB(A) noise contour is situated 70 feet from the centerline of the outermost traffic lane. The L_{dn} 55 dB(A) contour extends 380 feet into the site. Where housepads are elevated 30 feet above the roadway, the theoretical contours are reduced: L_{dn} 55 extends 120 feet into the site.

Using 1995 ADT of 27,000 for Pomerado Road and the 1973 Wylie curves, the following future noise calculations were developed:

	Level Terrain	30 feet elevated housepad
L_{dn} 65 dB(A)	125'	85'
L_{dn} 60 dB(A)	300'	100'
L_{dn} 55 dB(A)	700'	250'

Noise analysis was conducted assuming that Camino del Norte will be improved to a major roadway and generate 40,000 ADT. The 1995 L_{dn} 55 dB(A) is located 520 feet from the centerline of the outer-lane of the proposed road. The L_{dn} 65 dB(A) is located 92 feet into the project site.

Currently, Lots 55, with portions of 1, 107 and 108, will be subject to L_{dn} levels of 55. By 1995, Lots #1, 43-65 and 73-108 will experience L_{dn} levels of 55 or higher.

7. Air Quality

The proposed project will have incremental adverse air quality impacts. This project will generate 1,400 ADT. Commuting distances to employment and commercial centers will incrementally impact air quality. When considered with other Poway developments, both proposed and approved, this project will contribute to cumulative adverse impacts to air quality.

The proposed project lies within the San Diego Air Basin. The Basin presently exceeds Federal and State standards for particulate, carbon monoxide and oxidant. The project site lies in between the Escondido and Kearny Mesa Air Monitoring Stations.

Days Exceeding Standards in Escondido

	State	Federal
1974	43	89
1975	33	52
1976 (to August)		74

Days Exceeding Standards in Kearny Mesa

	State	Federal
1974	35	60
1975	35	55
1976 (to August)		48

Alternatives

1. Timing

An alternative would be to delay construction of the proposed project. This would reduce impacts to schools, traffic, and sewer service. A delay of project construction would allow time for services to expand and keep up with the development that has so rapidly taken place in the Poway Community.

2. Redesign

Another alternative is to redesign the proposed project from the presently proposed single family lots to a Planned Residential Development (PRD). This redesign would be consistent with the Poway Community Plan for those portions of the project designated as low PRD (southwestern area). A PRD allows clustering of homes which could minimize environmental impacts. The existing design does allow for existing trees and designates the drainage swale as proposed open space. However, the developer may wish to consider placement of homes away from Pomerado Road, thus reducing noise impacts to future homes.

POWAY WOODS

ENVIRONMENTAL IMPACT REPORT

AUGUST, 1976

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

FOREWORD

This environmental impact is prepared pursuant to the California Environmental Quality Act of 1970 and the County of San Diego's Environmental Impact Report Guidelines. The information provided herein pertains to the proposed Poway Woods residential development located on the westerly side of Pomerado Road at its intersection with La Manda Drive in the Community of Poway, County of San Diego, California. The site is shown graphically on Figure 1. The project is to be developed by San Marcos Development Company at: 1140 Union Street, Suite 111, San Diego, CA 92101.

This report assesses the proposed development with respect to the local, regional, short-term and long-term environmental impacts associated with the implementation, completion, and habitation thereof. The intent is to provide data and information relating specifically to the particular site.

The material and information in this report are intended to enable the public agencies involved to evaluate the project impacts, prescribe mitigative measures, if appropriate, and consider alternatives to the proposal.

The Poway Woods project proposes the construction of 114 single family detached dwelling units on 48.8± acres. The project includes a tentative subdivision map, a special use permit for

"lot averaging" pursuant to Section 559 of the County's Zoning Ordinance and a street vacation request to abandon portions of Pomerado Road, La Manda Drive and an unnamed County road.

SECTION I

PROJECT DESCRIPTION

The 48.8 acre project proposes 114 lots for the construction of single family detached residences thereon. Average lot size in the project varies substantially depending on the underlying zoning and land use designated on the Poway Community Plan. The portions of the property southwesterly of proposed Camino del Norte (SA 680) is designated as "Low (PRD)" on said Plan and the zoning is R-1. With the requested special use permit for lot averaging, minimum lot size in that area is 7,500 square feet but the average is approximately 11,600 square feet. The area east and north of SA 680 is designated as "Estate" on the Poway Plan. The zoning is R-1 and E-1-A. The minimum lot area in this portion of the project is 16,335 square feet, but the average is 27,000 square feet. 37.5 acres of the site are devoted to residential lots for an overall average size of 14,330± square feet. The configuration of the project can be more clearly understood by referring to the Poway Woods Tentative Map in the back of this report.

Approximately 5 floor plans are anticipated with a collective total of approximately 17 front elevations. The size of the proposed residences ranges from 1,068 to 2,169 square feet. A representative sample of the floor plans is shown on Figures 2 and 3. Average housing cost is expected to be between $45,000 and $54,000 thereby serving moderate income families. FHA backed mortages for buyers of the residences are proposed by the Developer.

Through the use of lot averaging, 8.6 acres of the property will be retained in natural open space which will preserve the existing eucalyptus grove and approximately 95 percent of the water course which traverses the site. Camino del Norte has been shifted slightly from the location proposed by the County's Department of Transportation (D.O.T.) enabling preservation of the water course and the grove. Approximately 11.3 acres are to be utilized for public street purposes.

The project includes provision for the dedication of both Pomerado Road and Camino del Norte (SA 680) in accordance with their Major Road and Prime Arterial respective designations of the Poway Community Plan. Pomerado Road will be improved to full standards as specified by the Department of Transportation. The dedication of Camino del Norte will provide a critical link in the eventual construction of a new route linking I-15 to the Poway Community thereby solving some of the current traffic problems in the area.

The vacated portions of La Manda Drive and the unnamed County road will be superceeded with new and improved streets when the project is completed providing for safer traffic circulation in the area. The portions of Pomerado Road to be vacated is in excess of County needs.

Construction phases of the project are estimated to commence approximately twelve months after approval of the tentative map with completion estimated to be approximately 18 months later.

Occupancy of the residences should occur in the first calendar quarter of 1978 and continue through the third calendar quarter of 1979.

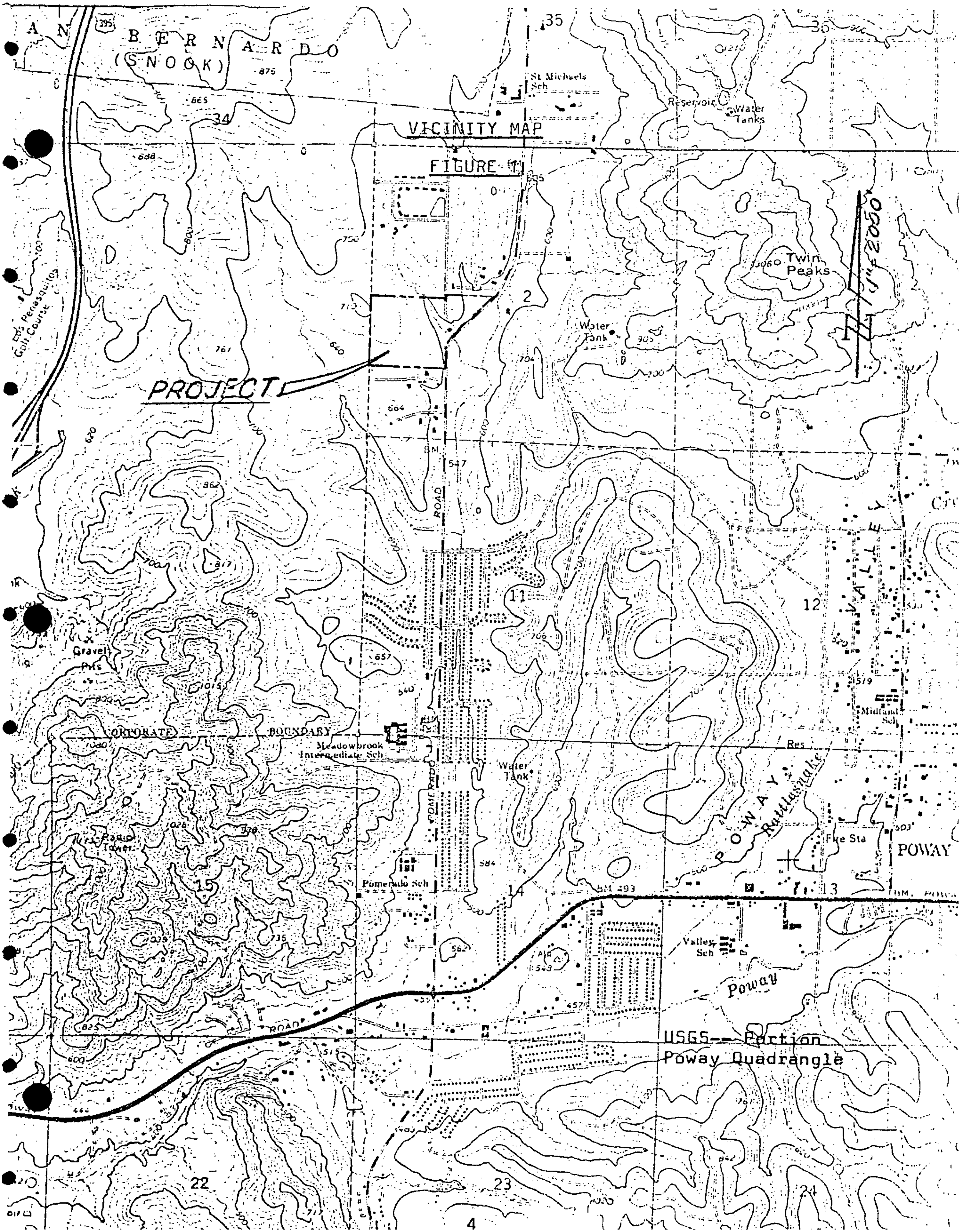
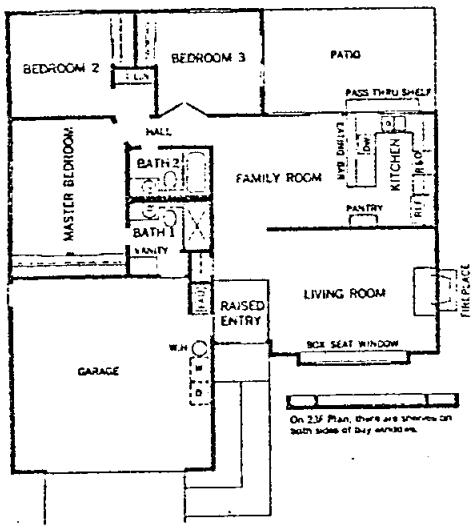

VICINITY MAP
FIGURE 1
PROJECT
1"=2000'
USGS-- Portion
Poway Quadrangle
B E R N A R D O
(S N O O K)
St. Michaels Sch
Reservoir
Water Tanks
Twin Peaks
Water Tank
Los Penasquitos Golf Course
ROAD
Gravel Pits
CORPORATE BOUNDARY
Meadowbrook Intermediate Sch
Water Tank
POMERADO
Radio Tower
Pomerado Sch
Midland Sch
Res
P O W A Y
Rattlesnake
V A L L E Y
Fire Sta
POWAY
Valley Sch
Poway
BM 493
BM 547
35
34
2
11
12
14
13
15
22
23
24

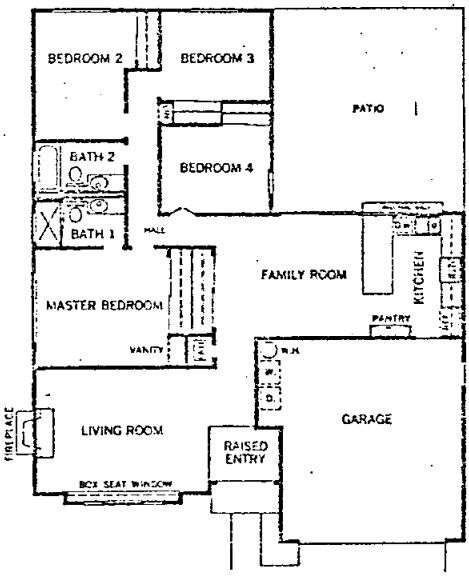
FIGURE 2

Plan No. 123: 3 bedrooms, 2 bathrooms



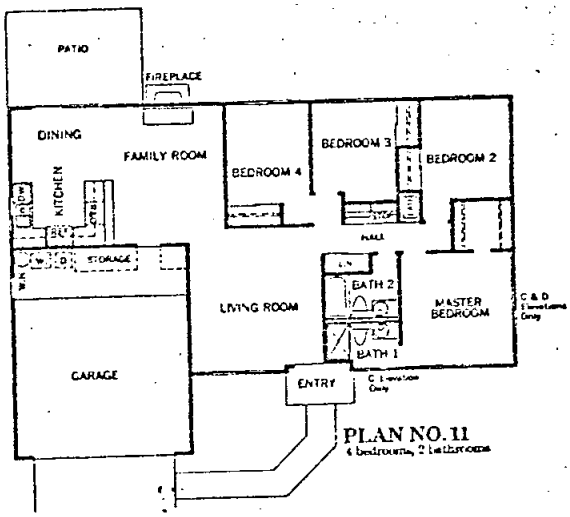
A very spacious three-bedroom home. Notice the box seat window in the living room, and the eating bar separating the family room and the bright and spacious kitchen. Still another added touch is the sliding glass door giving bedroom three access to the large patio.

Plan No. 18: 4 bedrooms, 2 bathrooms



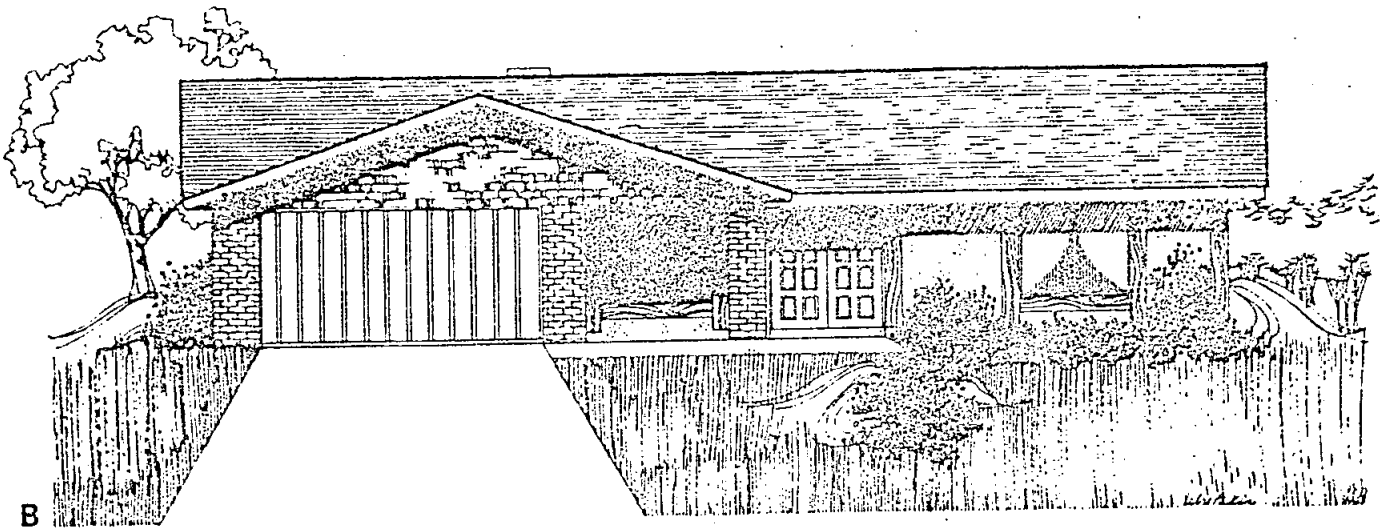
There are oversized rooms throughout this four-bedroom plan. The patio is huge, with access both from the family room and the fourth bedroom. A handy ceramic tile breakfast bar divides the family room and the unusually airy and spacious kitchen. Notice the separate vanity in the master bedroom, and box seat window in the living room.

Plan No. 111: 4 bedrooms, 2 bathrooms

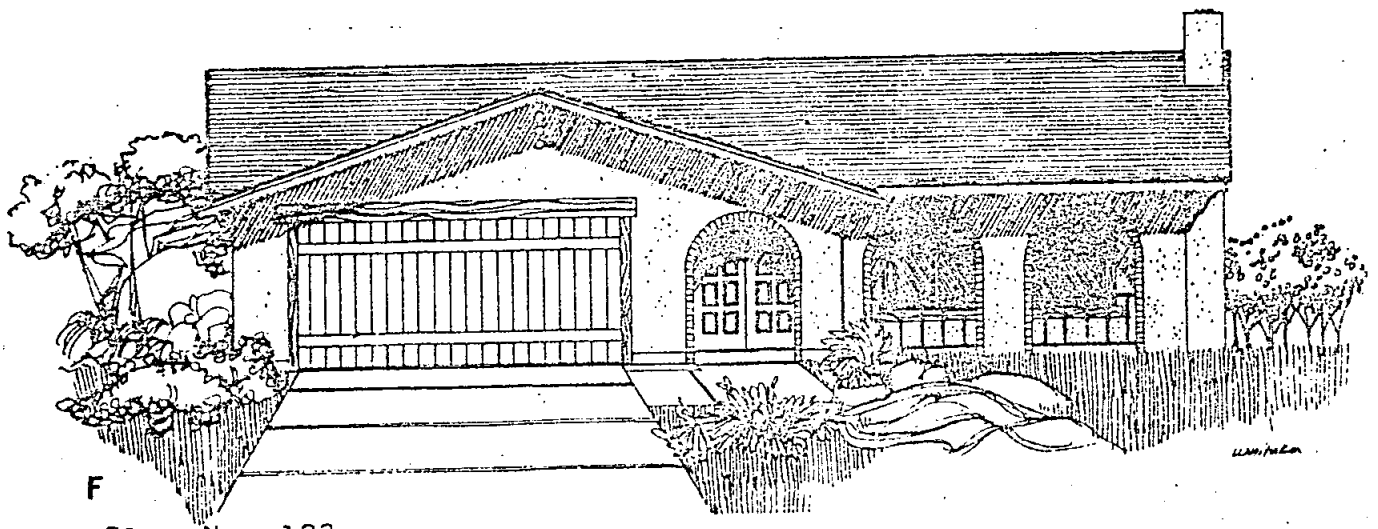


There are plenty of rooms with lots of room in this floor plan. The master bedroom features a walk in closet. The fireplace has been put in the family room, highlighting the large kitchen/dining/family room complex designed for family living.

FIGURE 3



B
Plan No. 111



F
Plan No. 123

E-1
Plan No. 1101

SECTION II

ENVIRONMENTAL ANALYSIS REPORTS

LAND USE AND PLANNING

Environmental Setting

The 48.8 acre site is currently uninhabited. Vegetation on site consists primarily of non-native grasses and coastal sage scrub communities. A small grove of approximately 11 eucalyptus trees exists in the eastern portion of the site.

The area to the west of Poway Woods, which is vacant and uninhabited, lies within the City of San Diego in the proposed Carmel Mountain East Master Plan. The adjoining properties immediately to the north and south have been developed with scattered single family detached homes through the "lot split" process. Neighboring properties to the northeast and south have been developed with single family residences to full urban standards. Across Pomerado Road from the subject site lies a 28 acre property on which the Planning Commission recently approved a tentative subdivision, consisting of 68 lots, known as Casa Real Poway, Unit No. 7. Pomerado Ridge, a proposed large scale project with 1975 units to be built over a ten year development schedule, also lies easterly of of Pomerado Road.

A tentative map, known as Meadow View Estates, has been filed abutting the site on the north. This map proposes

Environmental Setting (continued)

43 lots. Approximately 325 feet southerly of the site is another subdivision currently being proposed which proposes 30 lots.

Approximately one-half mile northerly on the east side of Pomerado Road is the Pomerado Hospital which is currently under construction and is scheduled for completion in the summer of 1977.

Commercial facilities exist one and one-half miles southerly of the site on Pomerado Road with larger commercial areas on Poway Road.

There are several Churches in the area to serve future residents. The predominent use, however, is one of single family detached residences.

As indicated in the project designation, Poway Woods lies within two different land use classifications on the Poway Community Plan. The proposed Camino del Norte (SA 680) bisects the property on a southeast-northwest alignment. The area southwesterly of SA 680 is designated as "Low (PRD)" on the Plan allowing a density up to five dwelling units per acre. Existing zoning in the area is R-1 which provides for single family homes or lots of 10,000 square feet. The area northeasterly of SA 680 is designated as "Estate" on the Poway Plan which allows for one dwelling unit per gross acre. Approximately 7.0 acres of this northeasterly portion lie within the R-1 zone. The remaining 10.2 acres are in the E-1-A zone, one half acre estates.

Environmental Setting (continued)

Camino del Norte is designated as a "Prime Arterial" on the Poway Plan and as such would have a dedicated right-of-way of 126 feet. The Circualtion Element of the San Diego County General Plan currently designates this route as a freeway for 1995. Due to State funding problems, the County's Department of Transportation has recently initiated an amendment to the Circulation Element to show SA 680 as a Prime Arterial rather than a freeway. Pomerado Road is designated as a Major Road on the Poway Plan and the Circulation Element of the County General Plan.

Environmental Impact

The development as proposed will change the use of the land from its current vacant and uninhabited status to a low density urban land use similar to and compatible with other existing and proposed projects in the area. It is believed that the project is compatible with the Poway Community Plan land use designation and the existing R-1 and E-1-A zoning.

Provisions of the Community Plan compatibility matrix require a special use permit for development in the "Residential, Low (PRD)" category in the event PRD regulations are not employed in development of the site. The lot averaging special use permit, pursuant to Section 550 of the Zoning Ordinance, satisfies this requirement. The overall density of the project is 2.34 and 3.04 dwelling units per gross and net acre

Environmental Impact (continued)

respectively. The project also conforms with the County's current plan for traffic circualtion in the area.

Based on the guidelines of the Initial Growth Policy of the County of San Diego, it is believed that this particular site should be encouraged for development.

Mitigative Measures

The development proposes to use only 65 percent of the maximum density permitted by the Poway Community Plan. In addition, the R-1 zoned area northeasterly of Camino del Norte is proposed for development in substantial accordance with the E-1-A zone.

LAND FORM/GEOLOGY

Environmental Setting

Land Form

The subject property constitutes the side slopes and mesa area above the slopes of the Pomerado Valley. The site ranges in elevation from elevation 580 on Pomerado Road to a high point of elevation 700 at the westerly project boundary. A slope analysis of the site has been completed. Approximately 27.2 acres (55.7%) are in the 0-10 percent slope category; 16.5 acres (33.9%) in the 10-20 percent slope category and only 5.1 acres (10.4%) have natural slopes in excess of 20 percent.

Regional Geology

The regional geology of the area has been extensively described in the Environment Impact Report (EIR) for Casa Real Poway, Unit No. 7 and in the EIR for Pomerado Ridge. For particulars, reference to these two reports should be made. It should be noted that the ancient landslide problems experienced on those two sites do not occur on the Poway Woods property.

Local Geology

The prevailing soil consist of five different soil types which in general correspond to elevation ranges of the property. Above an elevation of approximately 685, siltstones consisting of cemented, highly fractured sandy silts with caliche exist. Between the elevation

Local Geology (continued)

ranges of approximately 610 to 685 feet, conglomerants consisting of clayey gravels prevail. Below the elevation of approximately 610, mudstones consisting of sandy, clayey silts exist. Topsoils, consisting of loose expansive clay over the side slopes of the property, exist to a depth of approximately 3 feet with approximately 4 feet of loose fill in the canyon area.

Both the siltstone and the mudstone formations have potential for slope instability. A soils report by Southern California Testing Laboratories, Inc. (SCT 310084) was prepared for the subject property in May 1973. This report is included in its entirety as Appendix "A". This soils report does not reflect any mineral deposits on the site.

Geological Hazards

The Siesmic Safety Elements, part 5, San Diego County General Plan, 1975, indicates no active faults on or in the vicinity of the project, although landslides do exist off-site in the project vicinity. The California Division of Mines and Geology in the County of San Diego does not indicate that geologic hazards are a significant factor on the project site.

Environmental Impacts

Grading

It is estimated that approximately 230,000 cubic yards of earthwork will be necessary to prepare the site for envisioned housing. Of this volume, approximately 36,500 cubic yards of cut is attibutable soley to the grading of Camino del Norte. This is necessary to meet the grade and alignment criteria established by the Department of Transportation. All material would be moved on-site without the need for any export or import.

Approximately 82.4 percent of the site will be graded leaving 8.6 acres or 17 percent in its natural state. This natural area includes much of the steeper side slopes on the site. Exposed cut and fill slopes, to a height of approximately 30 feet and 40 feet, respectively, are proposed at a slope gradient not to exceed 2 horizontally to 1 vertically. These maximum slopes occur along Camino del Norte and at the rear of Lots 97 through 100. Additionally, there is one composit cut/fill slope of approximately 50 feet in height at Lot 92 along Camino del Norte.

The impacts of this work on the project are as follows:

A. The land form and biological environment of 82.4 percent of the site will be permanently altered.

Grading (continued)

B. Prior to the maturity of landscaping, the soils will be exposed to climatic conditions without ground cover with the resultant probability of wind and water erosion and sedimentation of Pomerado Creek. This will be a relatively short term impact and can be substantially mitigated.

Slope Stability

A slope stability analysis was performed for the various soil types by Southern California Testing Laboratories and is summarized in their previously referenced report. Their analysis indicates that cut slopes of up to 13 feet in height may be safely graded in the mudstone formation at a 2:1 slope gradient using a factor of safety of 1.5. Conglomerant material represents no problems with respect to slope stability. The siltstones, which represent potential slope instability due to their highly fractured nature, could not be analyzed due to this characteristic.

Adverse Soils

The referenced soils report, Appendix "A", indicates that the upper 3 feet of topsoil on the side slope areas is loosely compacted and expansive in nature. Uncompacted fill material also exists on the canyon floor.

Adverse Soils (continued)

Adherence to the recommendations presented in Appendix "A" will be required to avoid possible adverse effects from these conditions.

Mitigative Measures

The design of the grading plan and the manner in which the site is selectively graded can substantially mitigate potential adverse impacts. Mitigative measures are proposed by the grading shown on the tentative map. These measures consist of the following:

A. The cut slopes proposed in the siltstone formation in the area of Lots 72, 79, and 80 is proposed to be graded at a 3:1 gradient.

B. Cut slopes in the mudstone formation are not proposed in excess of 13 feet as recommended in Appendix "A".

C. Structural fills are not proposed in the canyon area which is being preserved in its native state.

D. 8.6 acres of the steeper portion of the site are to be preserved in its natural state.

E. In areas of the mudstone formation along Pomerado Road, fill slopes are proposed which will buttress this soil type which has relatively weak strength parameters.

Mitigative Measures (continued)

Compliance with the recommendations shown in Appendix "A" is assured through plan checking and grading inspection by County of San Diego personnel and a qualified soils engineer. In addition, slope planting and erosion control pursuant to the County Grading Ordinance will be required by the appropriate County Agencies.

BIOLOGY

Environmental Setting

A biological survey of the site was made to identify the types and extent of existing vegetation and wildlife. This report, prepared by Mitchel Beauchamp of Pacific Southwest Biological Services, is included by this reference as Appendix "B". Approximately 45 percent of the site is covered by "disturbed" ruderal or weedy vegetation. The majority of the remainder is coastal sage scrub community with a small area of mesic flora through the drainage swale. A few desiccated, remnant vernal pool sites were observed, but none had the endemic plant species normally associated therewith. For specifics of the vegetative community and wildlife habitats, Appendix "B" should be consulted.

Three plant species with various "rare and/or engangered" status were identified. These are *Ferocactus viridesens* which is presently proposed as an "endangered species" by the United States Fish and Wildlife Service; *Dudleya variegata*

Environmental Setting (continued)

which is listed as "rare and endangered" by the California Native Plant Society; and Selaginella cinerascens which has an "uncertain" status with the California Native Plant Society. No rare or endangered animal species were observed or are expected on the site. The Loggerhead Shrike is listed on the Audubon Blue List; however, it is not considered to be dwindling in San Diego County.

Environmental Impact

The development will remove approximately 40.2 acres of the existing vegetation on the site while retaining 8.6 acres substantially in its native state. Most of the vegetation to be removed consists of the coastal sage scrub. In consideration of the abundance of this community, removal is not considered significant nor is the minor loss of the "disturbed" grass land vegetation due to its make up of non-native species. Loss of this vegetation does constitute an incremental reduction of natural vegetation.

The project would also result in the elimination of the small population (25-50 plants) of the Dudleva variegata on site. Approximately one half of the Selaginella cinerascens and a small portion of the Ferocactus viridescens would be preserved in the natural open space area.

Mitigative Measures

Most of the grassland area will be retained. These areas to be retained are in the water course area and steeper side slopes of the site which are the most visable areas for motorist on Pomerado Road. The grove of eucalyptus trees near Pomerado Road will also be preserved as will portions two of the three California Native Plant Society designated plant species.

Prior to grading and site clearing, the populations of the Selaginella cinerascens and the Ferocactus viridescens out of the area to remian natural will be re-located and planted in areas to remain natural. This will insure the preservation of all of these species that exist on the site.

Ornamental landscaping will be planted by future project residents to off-set the reduction in native habitat.

ARCHAEOLOGY

Environmental Setting

An archeology survey of the site was prepared by Stanley Berryman, a professional archeologist. The report concluding the results of that survey are attached as Appendix "C".

The survey revealed no archeological sites in evidence on the property although numerous artifacts were noted. Also, sluffage from a small site on the westerly adjoining land was indicated.

HYDROLOGY

Environmental Setting

Regional

Run-off from the site, and the water course which flows through the site, is tributary to the Pomerado Creek which flows southerly along the east side of Pomerado Road. Intermittent drainage is experienced in both of these water courses. Pomerado Creek is channelized both northerly and southerly of the project area with a reach of approximately one mile remaining substantially in its natural state across Pomerado Road from the subject site. Channelization of a portion of this area is proposed by the Casa Real Poway, Unit No. 7 subdivision. Pomerado Creek's flows meet with Poway Creek approximately 2.5 miles southerly of the project area. Below this confluence, the combined course is known as Penasquitos Creek which flows westerly through the Los Penasquitos Canyon for approximately 10 miles where it is discharged into the Penasquitos Lagoon and the Pacific Ocean.

Local

Approximately 236 acres, which represents a flow of 240 cubic feet per second (cfs) from a storm of a 100 year frequency, is tributary to the site and is discharged under Pomerado Road through a culvert constructed by the County's Department of Transportation in conjunction with their recent widening and realignment

Local

of said road. This primary water course exists substantially in its natural state as does a smaller water course in the northeasterly portion of the site. The last referenced water course has a tributary area of 51 acres and an expected 100 year storm run-off of approximately 70 cfs. Flows from this smaller water course are proposed to be placed in an underground conduit and discharged through an existing pipe under Pomerado Road while the primary water course is proposed to remain substantially undisturbed.

Environmental Impact

The impact of Poway Woods on surface run-off is virtually unmeasurable with respect to the time of concentration of storm run-off and the resulting volume of flows. Creation of pads which will permit greater times of concentration upon which run-off is, in part, based will increase percolation into the soils and decrease run-off which would not otherwise occur on sloping natural land.

Erosion and siltation potential impacts have been previously discussed under "Geology".

Groundwater

Inasmuch as the project will be connected to the facilities of the Pomerado County Water District with domestic water supplied by the Poway Municipal Water District, no impact to the supply, quality or capacity of an aquifier is expected.

WATER QUALITY

Environmental Setting

Surface run-off is intermittent and is discussed above under "Groundwater". The aquifiers in the area will not be effected significantly.

Environmental Impact

An incremental impact to the quality of surface run-off is expected due to the introduction of fertilizers, rubber and other deleterious material associated with the use of streets and urban lifestyles.

AIR QUALITY

Environmental Setting

The nearest air monitoring station of the San Diego Air Pollution Control District (SDAPCD) is located in Escondido approximately 9 miles northerly of the project. While data from this station may not accurately reflect air quality in the Poway area, it is the nearest station and nearly equal distance from the ocean. The intervening mountain formations are higher in the Escondido Region and therefore reduce easterly prevailing winds which disperse and diminish air pollutants. Because of the lower ranges west of the Poway Area, coastal winds are expected to provide greater dispersement and better air quality.

Environmental Setting (continued)

The Escondido Station exceeded the State's hour oxident standard of .10 ppm on 49, 43, and 33 days in 1973, 1974, and 1975, respectively. Air quality can be said to be generally improving in that basin in spite of the growth rate. Similar or better conditions could be expected in Poway.

Environmental Impact

Implementation of the project is expected to have an incremental impact on both the local and regional air quality. Precise meterological conditions of the project site are not specifically known and the local impacts are therefore undeterminable. An estimate of stationary and mobile emissions is estimated below. The impact on the regional air quality from 114 dwelling units is not felt significant in itself, though it does contribute to the overall air quality problem in the San Diego air basin.

When fully implemented, the project is estimated to generate 1,140 vehicle trips per day as would any development of a similar size. Pollutants would be emitted from auto travel and from fixed sources onsite. Utilizing the average emissions projections of the EPA (AP-42 Second Printing, March 1975) Table 31.1-1 the following impacts would be expected:

EMISSION FACTORS

Year	Hydrocarbons g/mi. exhaust & crankcase	Carbon Monoxide g/mi.	Nitrogen Oxides g/mi.	Particulates g/mi. exhaust & tire	Sulfur Oxides g/mi.
1978	4.03	31	3.8	.58	.32
1980	2.93	23	3.1	.58	.32
1990	1.68	12	1.8	.58	.32

MOBILE SOURCE EMMISSIONS

Year	Units	Estimated Daily Miles*	HC tons/day	Co tons/day	No_x tons/day	Part. tons/day	So_x tons/day
1978	56	3,920	.0174	.134	.016	.003	.0014
1980	114	7,980	.0258	.202	.027	.005	.0028
1990	114	7,980	.0148	.106	.016	.005	.0028

*Based on 10 trips per dwelling unit and on an average trip length of 7 miles.

Natural gas consumption per SDG&E is estimated at 4,560 therms per month per 114 units (40 terms/unit/month) = 1,315 therms unit/day = 124.64 cubic feet/unit/day or 14,208 cubic feet for 114 dwelling units daily or .0142 million cubic feet for the project daily.

Emission factors for natural gas combustion, domestic heating, cooking etc. (EPA AP-42) and impacts expected are as follows:

STATIONARY SOURCE EMISSIONS

Pollutant	lbs/1,000,000 cubic feet	Natural Gas Consumption 114 du.	Daily Emissions in lbs/114 du.
Particulates	10	.0142 mill. lbs	.142
Sulfur Oxides	.6	.0142 mill. lbs	.008
Carbon Monoxides	20	.0142 mill. lbs	.284
Hydrocarbons	8	.0142 mill. lbs	.113
Nitrogen Oxides	80	.0142 mill. lbs	1.137

Dust and particulate matter will be introduced during construction phases, particularly grading operations, for the project which will add to the degradation of air quality temporarily. These phases are relatively brief with grading seldon taking more than 6 to 8 weeks to complete. The major portion of this impact will be felt during the initial construction phases.

Mitigating Measures

Impacts associated with construction phases will be brief in duration. Watering during grading operations will be required to provide proper soil compaction and will reduce the generation of dust.

Additional mitigative measures are largely the responibility of governmental agencies. The regulation and enforcement to achieve clean air standards by the SDAPCD, insulation requirements by building officials and the implementation of mass transit by state and local agencies must be relied upon to meaningfully combat air pollutants.

ENERGY

Environmental Setting

Both electrical and gas facilities of the San Diego Gas and Electric Company are available in Pomerado abutting the site to provide service to the project.

Environmental Impact

The project will creat an incremental local and regional increase in consumption demand for gas and electrical service. Gas consumption for the project is at 4,560 therms per month. Electricity consumption will be 1,824 KWH daily.

Mitigative Measures

The developer has indicated that a balanced energy system consisting of both gas and electrical power will be utilized in the project development thereby providing an efficient mix of energy trnsformation techniques. In addition, the dwelling units will be constructed with ceiling and exterior wall insulation in excess of current County insulation requirements.

NOISE

Environmental Setting

A noise survey of the property was made on August 6, 1976 by Westec Services, Inc. The details of the procedures of

Environmental Setting (continued)

that survey and subsequent study are contained in Appendix "D".

The L_{dn} 65 dB contour is situated 70 feet from the centerline of the outermost traffic lane. The L_{dn} 60 dB contour extends 155 feet into the property; the L_{dn} 55 dB contour extends 380 feet into the site. Where the home pads are elevated 30 feet above the roadway such as at lot 102, the theoretical contours are substantially reduced: L_{dn} 65 = 70', L_{dn} 60 = 88', and L_{dn} 55 = 120'. Accordingly, Lots 2, 55, and 107-108 would be exposed to backyard noise levels $\pm$ L_{dn} 60 dB. Lots 1 and 56 would be exposed to a noise level in mid-yard of L_{dn} 65 dB.

Environmental Impact

By 1995, Pomerado Road is assumed to be a four-lane roadway carrying an ADT of 27,000. Utilizing the Wyle methodology with 1973 case-graphs, the following contour distances were developed for Pomerado Road:

	Level Terrain	30' Elevated Home Sites
L_{dn} 65 dB	125'	85'
L_{dn} 60 dB	300'	100'
L_{dn} 55 dB	700'	250'

Additionally, Camino del Norte (SA 680) is assumed to be carrying an ADT of 40,000 in the 1995 time frame (4% truck mix).

Environmental Impact (continued)

Since most of the lots bordering Camino del Norte are roughly 25 feet or more above the roadway (excepting those lots just off Pomerado Road on "A" Street), the developed contours were based on the 30' elevated case:

Camino del Norte:	L_{dn} 65 dB =	92'
(1995)	L_{dn} 60 dB =	180'
	L_{dn} 55 dB =	520'

Accordingly, Lots 1, 56, 107-108 will be exposed to noise levels exceeding L_{dn} 65 dB in the 1995 time frame. Lots 2, 55, 82-89, and 109 will be exposed to noise levels greater than L_{dn} 60 dB. Lots 99 and 100 will be exposed to noise levels less then L_{dn} 60 dB.

Mitigating Measures

The project proposes earthen berms, approximately 4 feet high along Pomerado Road in Lots 102 through 108 and Lots 99 and 100 which will have exposure to vehicular noise from Camino del Norte. Lots 82 through 94 which will be impacted by traffic noise from future Camino del Norte will be protected by a masonary wall or a wooden fence. The referenced noise report indicates that with the proposed attenuation, all lots will have noise levels within an acceptable range.

VISUAL QUALITY

Environmental Setting

The property presently consists of a small canyon with natural intermittent drainage together with side slopes of the Pomerado Valley and overlying mesa areas. These areas are covered with annual forbes and grasses which are viewed from vehicular traffic on Pomerado Road and future traffic expected on Camino del Norte. Additionally, a small eucalyptus grove is located on the northerly fringe of the water course adjacent to Pomerado Road.

Unauthorized public use of the site appears minimal. However, some trace of motorcycle action is evident.

Environmental Impact

The natural side slopes along Pomerado Road northeasterly of its intersection with Camino del Norte will be reshaped using a 2:1 slope gradient which will be planted with ornamental landscaping. In addition, proposed "A" Street and lots fronting on "A" Street will remove existing vegetation and alter the land form in the side hill area. Camino del Norte has been re-located slightly from the Department of Transportation's alignment to preserve the eucalyptus grove in the water course area. A composite cut/fill slope with a maximum height of approximately 50 feet will be graded on the southwesterly side of Camino del Norte at the rear of Lots 82 thru 92. All of these slopes will be planted and irrigated

Environmental Impact (continued)

in accordance with appropriate County regulations and ordinances.

During construction operations, approximately 40 acres of the site will be viewed as a graded area without vegetation. After a brief time, slope planting and homes will be situated on lot pads together with landscaping which will be installed to the future owner's taste and budget.

Mitigative Measures

As stated above, the eucalyptus grove will be retained as will the natural water course which generally parallels the northly side of Camino del Norte. In addition to this 4.4 acres, another 4.2 acres consisting of natural side slopes will be retained. All exposed slopes created by construction operations will be planted and irrigated in accordance with the County's Grading Ordinance. All telephone and power lines for the project will be underground installation.

WASTE DISPOSAL

Environmental Setting

Solid Waste

Solid waste disposal in the Poway area is handled by Sani-Tainer, Inc. under contract with the County of San Diego. Solid waste is disposed of at the Miramar landfill site which is located northerly of Clairemont Mesa Blvd. and westerly of Highway 395 (163). This

Solid Waste (continued)

landfill is expected to be in operation until mid-1977; with a new landfill site, the Northeast Miramar landfill, expected to open sometime in the near future. The new site has an estimated life of approximately 25 years.

Environmental Impact

Based upon 3.8 persons per household and 6 pounds of solid waste per capita per day, approximately 2600 pounds of solid waste will be generated daily with full occupancy of the project. This volume will add incrementally to solid waste generated by the Poway Community and region. Considering the combined expectancy of the existing and proposed landfills for the project area, the overall impact is felt to be insignificant and no mitigation is proposed or deemed necessary.

Environmental Setting

Liquid Waste

The project lies within the service area of the Pomerado County Water District which has indicated, by letter, their intention to serve the property with sanitary sewers. A 12" sewer main exists at the southeasterly corner of the site in Pomerado Road and approximately 100 feet easterly of the easterly side of Pomerado Road.

Liquid Waste (continued)

The liquid waste generated by the project will be conveyed to the Point Loma Treatment Plant where it is treated and discharged through the Point Loma outfall per agreement with the San Diego Metropolitan Sewer Agency. The ability of the Pomerado County Water District to provide adequate sewer service for the Poway area has been questioned recently. It is suggested that direct reference be made to two reports: Pomerado County Water District Entitlement to the Remainder of the 4 MGD Sewer Capacity in the Penasquitos and Metropolitan Sewerage Systems by Pomerado County Water District and Development of the Poway Community "Position Paper" by the Department of Land Use and Environmental Regulations, County of San Diego. These will provide the reader a complete analysis of the District's request for an additional 2.0 million gallons per day (MGD) sewer capacity from the Metropolitan system.

The District currently has an undisputed 2.0 MGD allotment and a 4.0 MGD allotment if the Metropolitan Sewer Agency honors the District's request for additional capacity.

Environmental Impact

Future residents of Poway Woods will generate approximately 34,650 gallons of liquid waste per day based on occupancy of 3.8 persons per unit and 80 gallons of liquid waste per

Environmental Impact (continued)

person per day. This represents an increase of approximately 1.7 percent of the current flows being experienced by the District.

Mitigative Measures

The use of low water volume toilets and fixtures as now required by the District will reduce the demand on the District's and the Metropolitan Sewer Agency's facilities. With respect to the agreement between the City and the District, building permits will not be issued unless the District is able to assure service.

WATER SUPPLY

Environmental Setting

The Poway Woods project will be provided with domestic water by the Poway Municipal Water District which has a 6-inch and 12-inch water line adjacent to the property in Pomerado Road. Connection to the 12-inch water main is proposed to provide water service to the subject site.

Environmental Impact

Based on 135 gallons per capita per day, the project will creat a demand for 58,500 gallons per day using 3.8 persons per dwelling unit. The Poway Municipal Water District acknowledged their intention to provide water service to the project by their letter dated March 12, 1976 which is included

Environmental Impact (continued)

in the Appendicies of this report. This additional demand represents an incremental increase to the District's facilities.

CIRCULATION/TRANSPORTATION

Environmental Setting

Pomerado Road which establishes the eastern boundary of the property will provide the vehicular access to the project in the immediate future. Camino del Norte, which is proposed for dedication through the site, will ultimately provide an additional major access route. Pomerado Road is a major highway on the circulation element of the County's General Plan and the Poway Community Plan. This road has recently been widened and realigned to a 40 foot roadway width. The project proposes to widen this facility to provide an additional 21 feet of paving and a variable width dedication to bring this facility up to full County standards. Other major highways which will be utilized in addition to Pomerado Road are Poway Road and Rancho Bernardo Road both of which are shown as major highways (102 foot righ-of-way) on the circulation element of the Poway Community Plan. The following Table 1 reflects the current average daily traffic (ADT) of these circulation element routes.

TABLE 1

EXISTING AVERAGE DAILY TRAFFIC

Circulation Network Links	1975-76 Daily Volumes On Existing Major Street Network
Poway Road West of Pomerado Road	21,000
Poway Road East of Pomerado Road	23,600
Pomerado Road North of Poway Road	11,400

The I-15 corridor is currently being widened between Poway Road and Miramar Road. These improvements include a new interchange at its intersection with Poway Road. This improvement is scheduled for completion in December of 1977, which will add an additional 450-500 peak hour capacity to the referenced interchange. In addition, the County's Department of Transportation has proposed a new signalization and lane striping at the intersection of Poway Road and Pomerado Road which will add capacity to that intersection.

Proposed State Highway 56, an adopted route on the State Transportation Plan, is proposed approximately 2200 feet of the project's southerly boundaries. This route which is shown on the Poway Community Plan as a freeway is uncertain due to the economic conditions of the State's Department of Transportation and its apparent conflict with the Comprehensive Planning Organization's (CPO) Master Plan of streets and highways.

Environmental Impact

The project is expected to generate an additional 1,400 trips per day based upon 10 trip ends per dwelling unit. Of these trips approximately 28 will contribute to the morning peak traffic on Poway Road between Pomerado Road and I-15. The project is situated approximately equal distance from the Poway and Rancho Bernardo service areas.

Public transportation is available to future residents by mini-bus shuttle service provided by the San Diego Transit Authority. This service, Route 45, commutes along Pomerado Road to connect with the I-15 express service via Pomerado and Rancho Bernardo Roads. At the present time, San Diego Transit also has Route 44 to service the Poway area. Because of the present low demand in the Poway area, they are re-routing this route to try to increase patronage.

An in-depth traffic analysis of the region has been made relative to three major projects in the vicinity. These projects which are the Pomerado Hospital, Carmel Mountain East Residential Community and the Pomerado Ridge Residential project have extensive traffic analysis and direct reference to these studies is recommended for the reader.

Mitigative Measures

The dedication and grading of Camino del Norte, a primary arterial, (126 foot right-of-way) on the Poway Community Plan will be provided. It is the position of the County's Department of Transportation and the Integrated Planning Office (IPO)

Mitigative Measures (continued)

that Camino del Norte be improved as a primary arterial. This route when completed between I-15 and Community Road will provide substantial traffic relief for the Community. The development of Poway Woods provides a critical link in this much needed route. Pomerado Road will be dedicated additional right-of-way to complete its ultimate 51 foot half-width dedication. In addition, this major highway will be completed to full half-width improvement standards.

Occupancy of the proposed residences is not expected until mid-1978 which is approximately 6 months after completion of the on-going improvements on I-15 and after the resignalization and restriping of the Poway-Pomerado Roads intersection.

SCHOOLS

Environmental Setting

The project lies within the Poway Unified School District. The following Table 2 indicates the schools that would serve school-age children from the project.

TABLE 2

SCHOOLS AND MAXIMUM CAPACITY

Grades	School	Maximum Capacity	Current Enrollment	Distance From Project Site
K-5	Pomerado Elementary	677	647	2.1 miles
6-8	Meadowbrook Middle	1200	1126	1.8 miles
9-12	Mt. Carmel High	2200	1411	6.6 miles

Bus service is provided for students as a function of the grade and distance from the school on the following criteria:

Grade	Maximum Distance From School
K-5	1.0 to 1.5 miles
6-8	1.5 to 2.0 miles
9-12	2.0 to 2.5 miles

This qualifies all students generated by the project for busing to school.

Environmental Impact

The project is expected to generate school age children as shown on the following Table 3.

TABLE 3

STUDENT GENERATION

Grade	Students
K-5	84
6-8	18
9-12	18
TOTAL	120

The resulting 120 expected students will be introduced into the school system.

Mitigative Measures

The Poway Unified School District is requesting a contribution of $250 per house to off-set the cost of providing portable classrooms for students of the area. Payment by the developer is not required by board policy; however, this voluntary contribution to the Poway Unified School District would mitigate the impact of expected students into the school system.

FIRE PROTECTION

Environmental Setting

Fire protection is provided by the Poway Fire Department. The closest fire station to the property is located approximately 3.9 miles from the project and has an estimated response time of approximately 6 minutes.

Environmental Impact

The introduction of 114 residents will create an incremental demand for increased fire protection services.

Mitigative Measures

Native vegetation which represents high potential for brush fires in the dry summer months will be removed, in part, and replaced with ornamental landscaping requiring frequent watering. This will reduce the potential of fire hazard, as virtually every lot pad containing natural vegetation will be buffered by ornamental landscaping.

POLICE PROTECTION

Environmental Setting

Police protection will be provided by the San Diego County Sheriff whose nearest substation is located approximately 2.5 miles from the site on Poway Road with an associated 5 minute response time.

Environmental Impact

The project is expected to creat an incremental demand for increased police protection services.

SOCIO-ECONOMIC

Environmental Setting

The project lies on the western border of the Poway Subregional area adjacent to the easterly boundary of the City of San Diego. Since the site is currently uninhabited, no specific data is available.

Environmental Impact

The project will attract 114 households and approximately 433 residents. This will be an insignificant increase to the Poway population which is estimated at approximately 25,000 people. The houses to be built by the developer will have a present day price range of approximately 45,000 to 54,000 dollars which falls within the low to moderate price range of housing currently being developed in the County of San Diego. For more particulars, the reader should refer to communication from the Sanford R. Goodkin Research Corp. to San Marcos Development Company dated July 22, 1976 which is included in the Appendicies of this report.

The construction related activities required to implement the project will produce approximately 90-man-years of work which will provide an economic boast to employees in the construction and related industries. Furthermore, community and regional economic benefits will be experienced by merchants in retail trades and services due to increases in consumer perchasing power generated by the new residents.

SECTION III

ADVERSE IMPACTS

Grading over the majority of the site will create a permanent alteration of the natural land form and biological habitat causing dispursement of the faunal population of the site. During construction phases, soils will be void of vegetation and subject to wind and water erosion. Dust and noise from the project site will also be generated during construction phases.

Additional demand on all public services including vehicular access routes will be made. The project will also contribute incrementally to the degradation of air and water quality in the locale and region.

SECTION IV

ALTERNATIVES

Alternatives to the Poway Woods development as proposed can be categorized into the following four types:

A. No project

B. Lower density residential development

C. Higher density residential development

D. Alternate land uses

No Project

By not developing the site, the adverse impacts as described in Section III would be eliminated. Favorable economic impacts recognized by an increase in increased consumer purchasing power, increased tax base for public funding and the generation of construction related jobs would also be eliminated. The need for improved traffic circulation and new routes in the Community would remain unsolved or be the burden of the County.

Lower Density Residential Development

Development of a residential project at a lesser density than the 2.34 dwelling units per acre would not eliminate any of the adverse impacts associated with the proposal. The magnitude of the impact on public services would be reduced proportionally with the reduction of any lesser density alternative.

Lower density considerations would place an economic penalty upon the developer and would reduce the potential supply of badly needed moderate priced homes.

Higher Density Residential Development

Higher density development would have substantially the same advers impacts that are associated with the proposed project. Impacts to services would be greater in proportion to the increase in density of an alternate proposal. To achieve a higher density would require either an increase in graded area, a rezone or development under PRD regulations of the zoning ordinance. By physically developing the area, elimination or reduction of 8.6 acres natural area would be required. Market acceptance of attached housing under PRD regulations has not been high enough to consider this alternative as a viable consideration by the developer.

Alternate Land Uses

Commercial, manufacturing and institutional uses would be inconsistant with the Poway Community Plan, the current zoning and existing land uses in the area.

Other uses such as churches, parks, and school sites which could be found consistant with the Community Plan do not appear to be required. The County Recreation and Parks Department as well as the Poway Unified School District have indicated that they have no desire for the subject property.

SECTION V

SHORT-TERM USES VERSES LONG-TERM PRODUCTIVITY

The Poway Woods project will creat temporary disruptive effects from construction activities. These will be brief in nature and largely mitigated, as previously discussed.

The removal of 36.2 acres of native vegetation to enable to construction of 114 single family detached residences is virtually an irreversable committment. The natural land form and biological habitat will be permanently altered with a long-term incremental degradation of air and water quality. Additional demands for public services will be made.

The project will, in part, satisfy the demand for needed, affordable housing in the region now and in the future.

No long-term risks to the public's health and safety are expected to result from the proposed project.

SECTION VI

IRREVERSIBLE ENVIRONMENTAL CHANGES

Irreversible environmental changes to result from implementation of the Poway Woods residential development are as follows:

A. A long-term commitment from a natural habitat to one of residential urbanization

B. Permanent alteration of land form and biological habitats over much of the site.

C. Increased demand for public services by future residents

D. Modifications of the view from Pomerado Road commuters

SECTION VII

GROWTH INDUCING IMPACT

After occupancy of the project, which is expected to commence in mid 1978, it is expected that ultimately 114 households or 433 persons will occupy the site.

There are no significant direct growth inducing impacts associated with Poway Woods since all life support systems and streets necessary for the development are currently available at this property. The vacant land to the west (Carmel Mountain East) is currently on the Master Planning process with the vacant land to the north and east being proposed for development by the Meadow View Estates and Casa Real Poway Unit No. 7 subdivision. The properties to the south were created under the lot split procedures and have questionable potential for future division due to diversified ownership.

The project will not require expansion of sewer or water treatment facilities which would initiate expansion with excess capacity.

The project is in close proximity (2 miles) to the central business district of Poway. Retailors and service businesses in this area are expected to recognize favorable economic growth as a result of the communities increased purchasing power from development of Poway Woods.

Should the project be successful, the project will have indirect growth inducing effects in the Poway area and region.

SECTION VIII

CERTIFICATION OF ACCURACY AND QUALIFICATIONS

Certification of Accuracy

The environmental information in this report has been complied and analyzed from the sources and individuals indicated. To the best of my knowledge and belief, this information is accurate and correct and reflects same.

Richard G. Grabhorn (jt)
Richard G. Grabhorn

Qualifications

This report was complied by Grabhorn Engineering Corp. (GEC) of San Diego, California as a consultant for San Marcos Development Company. Outside consultants were retained by GEC to report on environmental aspects requiring specialized knowledge and expertise. These consultants and their contribution to this document are as follows:

Soils Engineering

Southern California Testing Laboratory
6280 Riverdale
San Diego, CA
Telephone: 280-4321

Biology

Mitchel Beauchamp
Pacific Southwest Biological Services
P.O. Box 985
National City, CA 92050
Telephone: 474-7219

Archeology

Stanley Berryman
1336 Oakdale Avenue
El Cajon, CA 92021

Noise

Westec Services, Inc.
1520 State Street
San Diego, CA 92101
Telephone: 233-7572

Environmental Consultant

William L. Moorhous
3250 Wing Street, #210
San Diego, CA 92110
Telephone: 223-2661

SECTION IX

AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONTACTED

Governmental Agencies

County of San Diego, Department of Transportation

County of San Diego, Environmental Analysis Division

County of San Diego, Land Use and Environmental Regulations

County of San Diego, Sheriff's Department

Poway Fire Department

Poway Municipal Water District

Pomerado County Water District

Poway Unified School District

San Diego Air Pollution Control District

San Diego State University, Anthropology Department

State of California, Department of Transportation, Division of Highways

San Diego Transit Authority

County of San Diego, Department of Sanitation and Flood Control

County of San Diego, Parks and Recreation

Private Organizations

San Marcos Development Company

San Diego Gas and Electric Company

Sani-Tainer, Inc.

Museum of Man

Sanford R. Goodkin

POWAY WOODS

ENVIRONMENTAL IMPACT REPORT

APPENDIX

AUGUST, 1976

gec grabhorn engineering corp.
CIVIL ENGINEERING LAND PLANNING
7364 el cajon blvd., suite 206, san diego, california 92115

TABLE OF CONTENTS

A. GEOLOGICAL AND SOILS REPORT

Woodland Plans, Series

SOUTHERN CALIFORNIA TESTING LABORATORY INCORPORATED
6280 RIVERDALE ST. SAN DIEGO, CALIF. 92120 • TELE 280-4321 • P.O. BOX 20627 SAN DIEGO, CALIF. 92120
29-630 HIGHWAY 111 PALM DESERT, CALIF. 92260 • TELE 346-1070
420 ENTERPRISE ST. ESCONDIDO, CALIF. 92025 • TELE 489-2662

May 24, 1973

Braewood Development Company
3375 Camino Del Rio So., Ste. 110
San Diego, California 92108

SCT 310084
Report No. 1

SUBJECT: Preliminary Soil Investigation for the Proposed Br...
wood Pomerado Site, Pomerado and La Manda Roads, Poway,
California.

Gentlemen:

In accordance with your request, we have performed an investigatio
of the soil conditions at the subject site. We are transmitting
herewith a report of this investigation.

The analysis of our findings is intended to provide the required
information to design the foundation and grading plans for the
proposed development.

In general, we found the site to contain loose fill in the canyon
bottom and soils with relatively low strength parameters below th
approximate elevation of 610 feet Mean Sea Level (msl). Further,
it was also found that the site is capped with approximately 3 fe
of highly expansive clays. It is our opinion, however, that the
site is suitable for development, provided the recommendations p
sented in this report are followed.

If you have any questions after reviewing our report, please do
hesitate to contact this office.

This opportunity to be of service is sincerely appreciated.

Respectfully submitted,
SOUTHERN CALIFORNIA TESTING LAB.,

Charles H. Christian, R. C. E.

CHC:jlc
cc: (4) Subm...d
(2) McCabe Engineering

Southern California Testing Laboratory

CONSULTING • TESTING • RESEARCH • DEVELOPMENT

6280 Riverdale St. • San Diego, California 92120 • Phone 280-4321

REPORT OF PRELIMINARY SOIL INVESTIGATION
PROPOSED BRAEWOOD POMERADO SITE
POMERADO AND LA MANDA ROADS
POWAY, CALIFORNIA

1. PROJECT DESCRIPTION AND SCOPE

This report presents the results of our preliminary soil investigation for the proposed Braewood Pomerado site located to the west of Pomerado Road and La Manda Road and north of the City of Poway, County of San Diego, State of California. It is our understanding that single or two story woodframe structures with slab-on-grade construction are planned for the site.

It is further understood that maximum cuts in the order of 30 feet and fills in the order of 15 feet are anticipated. The site configuration and test boring and trench locations are shown on Plate No. 1 of this report.

This soil investigation was undertaken to:

a) Determine the physical properties of the prevailing soils including their supporting capacities and settlement characteristics.

b) Provide design information regarding site preparation and foundations.

2. FINDINGS

2.1 Site Conditions

The subject site is traversed by a southeast trending canyon which intersects the easterly propertly line just south of the intersection of Pomerado and La Manda Roads. The majority of the site consists of the side slopes of this canyon. On-site elevations vary over a range of approximately 125 feet. Vegetation was found to consist of thick brush on the side slopes with moderately dense brush in the canyon bottom.

2.2 Soil Conditions

In general, the prevailing soil consisted of 5 distinctly different units as discussed below:

1) Siltstones: This material was noted to exist above an elevation of approximately 685 and consisted of cemented, highly fractured sandy silts with caliche in the fractures. Due to its highly fractured nature, stability problems may be encountered in cut slopes within this formation.

2) Conglomerates: Existing between the approximate elevation of 61 and 685, this material was noted to consist generally of clayey sandy gravels and sandy, clayey gravels. The consistency of th material ranged from dense to very dense. Although the matrix material of the conglomerates is highly expansive, it is our op ion that the quantity of sand and gravel is sufficient to rende this material nondetrimentally expansive.

3) Mudstones: The contact between the overlying conglomeratic materials and the mudstones was observed at approximately 610 msl. The mudstones consist of sandy, clayey silts with relatively low strength parameters. Because of their low strengths, slope stability problems are anticipated for slopes in this material over 10 feet in height.

4) Topsoils: The topsoils were found to consist of loose, highly expansive clays. These soils cover the side slopes and are approximately 3 feet in depth.

5) Canyon Bottom Fill: Approximately 4 feet of loose fill was noted in the bottom of the canyon. This fill was found to contain excessive amounts of deleterious and hard debris. Further, free flowing water was encountered at the contact between the loose fi and the underlying cobblestones.

3. RECOMMENDATIONS

3.1. Site Preparation

3.11 General: Due to their settlement characteristics and the amount o debris encountered, we recommend that the loose fill in the canyon bot be removed to firm ground and be replaced as compacted fill. Further, the deleterious material should be removed and properly disposed of of site.

3.12 Expansive Characteristics: The expansive characteristics of the surficial clayey soils described previously will require special cons tion and/or design so that structural damage is not likely to occur.

It is recommended that wherever expansive soils are used in fill, it be placed a minimum of 2.5 feet below finish grade and wherever it occurs within 2.5 feet of finish grade, it be removed and replaced with nonexpansive soils. Conventional footings may then be used for the proposed structure.

The limits of the above recommendation shall apply to the area within a perimeter of 5 feet outside of the proposed structure.

3.13 Subsurface Drainage System: In consideration of potential subsurface drainage in the canyon bottom beneath the proposed fill, we recommend that an under drain be placed in the bottom of the natural drainage course. The under drain should consist of not less than 4 inch drain tile or perforated pipe surrounded by not less than 4 cubic feet per lineal foot of filter material.

3.2 Foundations and Bearing Capacity: Conventional spread footings founded in nonexpansive soil are recommended for the support of the proposed structure. Conventional spread footings should be founded a minimum of 12 inches below the adjacent finish grade, have a minimum width of 12 inches and may be designed for an allowable soil bearing pressure of 1.2 kips per square foot.

If it is found to be unfeasible to prevent expansive soils from occurring within 2.5 feet of adjacent finish grade as recommended above, this office should be contacted for recommendations for construction on detrimental expansive soils.

3.3 Slope Stability

The cut and fill slopes constructed from native on-site materials will be stable with relation to deep-seated failures if constructed at or flatter than the following recommended slope ratios expressed in horizontal to vertical units for the indicated heights:

Conglomeratic Materials	
Cut Slopes to 58 Feet in Height:	1.5:1.0
Fill Slopes to 44 Feet in Height:	1.5:1.0
to 80 Feet in Height:	2.0:1.0
Mudstones	
Cut Slopes to 10 Feet in Height:	1.5:1.0
to 13 Feet in Height:	2.0:1.0
Fill Slopes to 10 Feet in Height:	1.5:1.0
to 13 Feet in Height:	2.0:1.0

The above maximum heights were determined using a factor of safety of 1.5.

3.4 Proposed Grading Plan

The following comments are made in regard to the proposed grading plan prepared by McCabe Engineering and dated March 8, 1973.

Due to the presence of the weak mudstones which exist below elevation approximately 610 msl, the 30 foot high slope proposed near Pomerado Road will not be stable in relation to deep-seated failure. We recomm

that either the grading plan be revised to eliminate cut slopes over 10 feet in height below the elevation of 615 msl or that they be buttresse with select material.

The highly fractured nature of the hard siltstones in the area of the 25 foot cut along the westerly property line make accurate testing and, therefore slope stability analysis, impossible. Slopes in this material should be constructed as flat as possible and should be thoroughly inspec ted during grading to insure that no major slope planes are present and that the slope will be stable. It should be noted that buttressing of this slope may be required if conditions warrant.

3.5 Earth Retaining Structures

Active and passive soil pressures for the design of earth retaining str tures will be dependent upon the particular soil condition being consid Should this information be necessary for design purposes, please provid this office with the location and type of wall proposed.

4. EARTHWORK

Earthwork and grading contemplated for site preparation should be acco plished in accordance with the attached Recommended Grading Specificat and Special Provisions. Structural backfill should be compacted to a minimum relative compaction of 90 percent as determined by A.S.T.M. 15 66T, Method A.

5. FIELD EXPLORATIONS

Ten subsurface explorations were made at the locations indicated on the attached Plate No. 1 on May 9 and May 14, 1973. These explorations consisted of borings drilled by means of a rotary bucket type drill rig and trenches dug by means of a backhoe. The explorations were conducted under the observation of our engineering geology personnel.

The explorations were carefully logged when made. These logs are presented on the following Plate Nos. 2 through 5. The soils are described in accordance with the Unified Soils Classification System as illustrated on the attached simplified chart. In addition, a verbal textural description, the wet color, the apparent moisture, and the density or consistency are given on the logs. Soil densities for granular soils are given as either very loose, loose, medium dense, dense or very dense. The consistency of silts or clays are given as either very soft, soft, medium stiff, stiff, very stiff or hard.

Representative core samples were obtained by means of a split tube sampler driven into the soil by means of the "Kelly bar" of the drill rig. The energy required to drive the split tube sampler is indicated on the boring logs as the "penetration resistance". The core samples were carefully removed, sealed, and returned to the laboratory for testing.

Disturbed samples of typical and representative soils were also obtained and returned to the laboratory for testing.

6. LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted American Society for Testing and Materials (A.S.T.M.) test methods or suggested procedures. Representative samples were tested for their natural densities and moisture contents. The results of these tests are presented on the boring and trench logs.

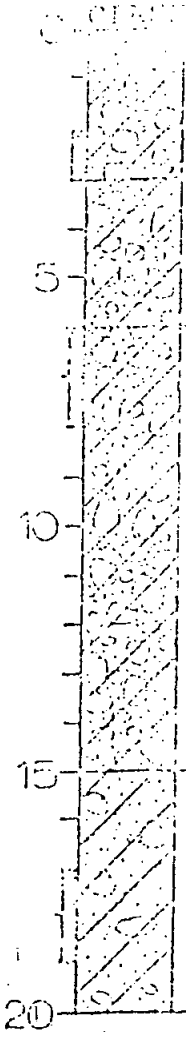
The expansive potential of clayey soils was determined in accordance with the following test procedure and the results of these tests appear on Plate No. 6.

> Allow the trimmed, undisturbed sample to air dry to a constant moisture content at a temperature of 100° F. Place the dried sample in the consolidometer and allow to compress under a load of 645 psf. Allow moisture to contact the sample and measure its expansion from an air dried to saturated condition.

In addition, the gradation, maximum density and the angles of internal friction and cohesion were determined for typical and representative samples. The results of the tests are presented on Plate Nos. 6 and 7 of this report.

BORING NUMBER 1

CLASS	DESCRIPTION
GC	Light Brown/Gray, Dry, Loose, VERY CLAYEY SANDY GRAVEL (Colluvium, Max. Size Approx. 8")
GC	Light Brown, Humid, Dense, SANDY CLAYEY GRAVEL (Natural Ground, Max. Size Approx. 14")
	Humid to Moist
SC	Yellow-Brown, Humid to Moist, Stiff, CLAYEY VERY GRAVELLY SAND



LEGEND -

: Sample Location

Y: Natural Dry Density (pcf)

M: Natural Moisture Content (% of Y)

SOUTHERN CALIFORNIA TESTING LABORATORY, INC.
6960 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120

Braewood Pomerado Site
Pomerado and La Bonita Roads
Poway, California

BORING LOG

BY MHP

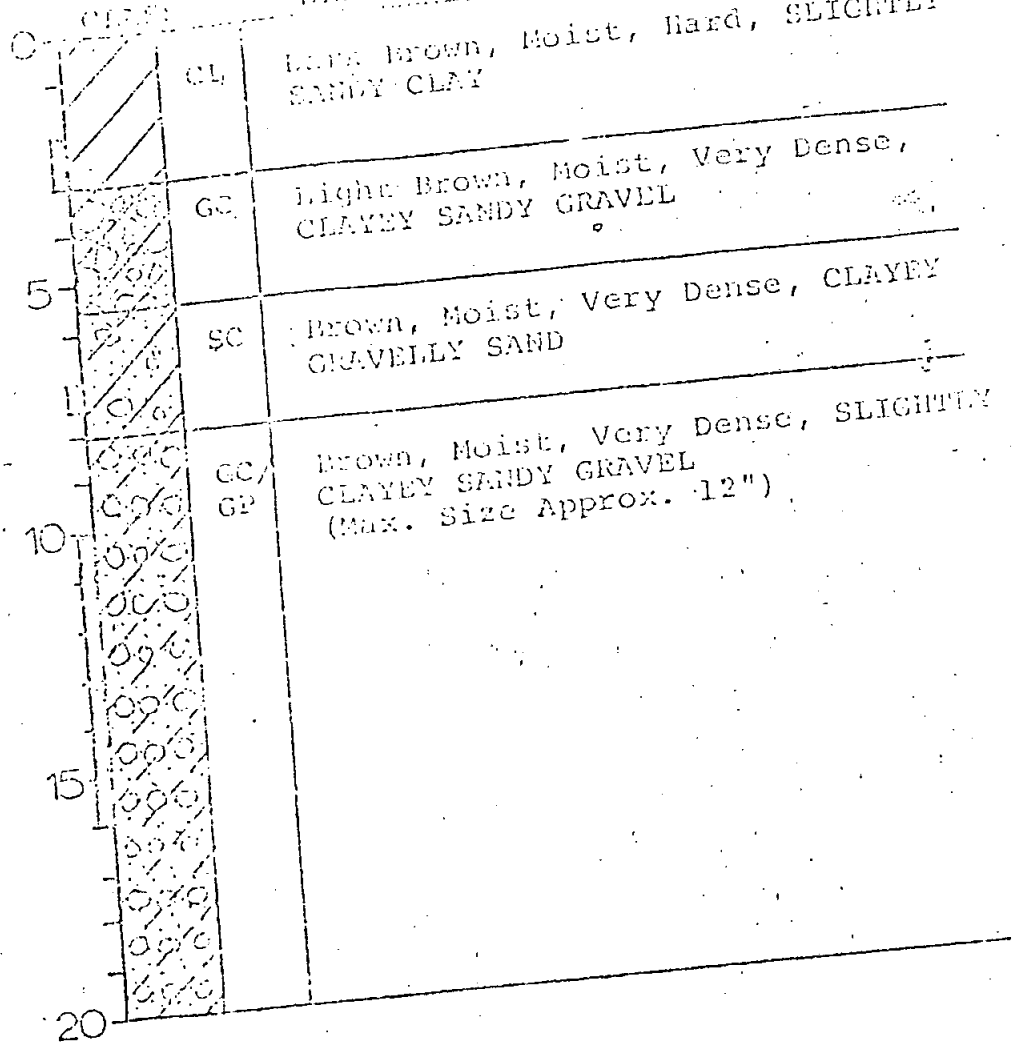
DATE 5/9/73

JOB NO.

PLATE NO. 2

BORING NUMBER 2

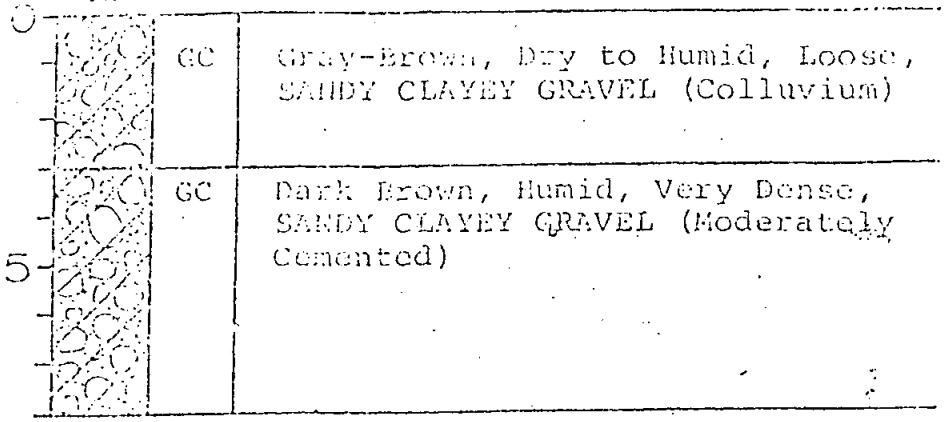
	Y	M
	104.2	19.2



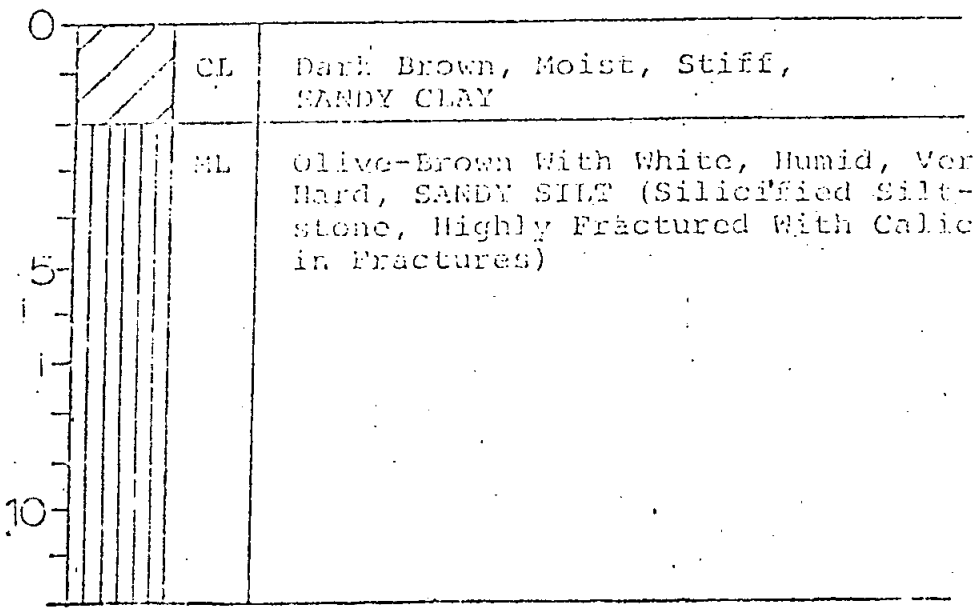
FOR LEGEND SEE PLATE NO. 2

SOUTHERN CALIFORNIA TESTING LABORATORY, INC. 6280 RIVERDALE STREET SAN DIEGO, CALIFORNIA 92120	Braewood Pomerado Site Pomerado and La Manda Roads Poway, California	
	BY MRP	DATE 5/9/7
BORING LOG	JOB NO. 310004	PLATE NO

TRENCH NUMBER 1



TRENCH NUMBER 2



SOUTHERN CALIFORNIA
TESTING LABORATORY, INC.
6280 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120

Braewood Pomerado Site
Pomerado & La Manda Roads
Poway, California

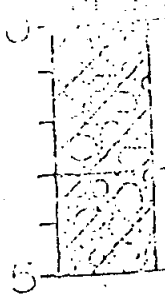
TRENCH LOGS

BY MRF

DATE 5/14/73

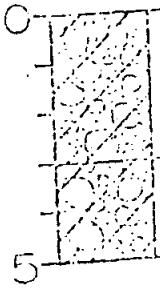
JOB NO

TRENCH NUMBER 3



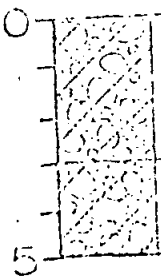
	DESCRIPTION
GC	Dark Brown, Humid, Loose to Stiff, SANDY CLAYEY GRAVEL
GC	Brown, Humid, Very Dense, CLAYEY SANDY GRAVEL

TRENCH NUMBER 4



GC	Dark Brown, Humid, Loose to Stiff, SANDY CLAYEY GRAVEL
GC	Brown, Humid, Very Dense, CLAYEY SANDY GRAVEL

TRENCH NUMBER 5



GC	Dark Brown, Humid, Loose to Stiff, SANDY CLAYEY GRAVEL
GC	Brown, Humid, Very Dense, CLAYEY SANDY GRAVEL

SOUTHERN CALIFORNIA
TESTING LABORATORY, INC.
6290 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120

Braewood Pomerado Site
Pomerado & La Monla Roads
Poway, California

TRENCH LOGS

BY MHP

DATE 5/14/7

JOB NO. 310084

PLATE NO.

TRENCH NUMBER 6

			Y	M
0	GC	Dark Brown, Humid, Loose to Stiff, SANDY CLAYEY GRAVEL		
	GC	Brown, Humid, Dense, CLAYEY SANDY GRAVEL		
5		Seepage		
		Wet to Saturated		
10				

TRENCH NUMBER 7

			Y	M
0	CL	Dark Brown, Humid, Loose to Stiff		
	CL/CH	Light Olive, Humid to Moist, Stiff, CLAY (Nudstone)	92.5	22
5				

TRENCH NUMBER 8

			Y	M
0	SC	Fill, Mixture of Loose CLAYEY SAND AND DEBRIS		
		Free Flowing Water		
		Natural Ground? Dense Conglomerate		
5				

FOR LEGEND SEE PLATE NO. 2

SOUTHERN CALIFORNIA TESTING LABORATORY, INC.
6260 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120

Bracewood Pomerado Site
Pomerado & La Mancia Roads
Poway, California

BY

DATE 5/14/

DIRECT SHEAR TEST

SAMPLE	DESCRIPTION	Angle of Internal Friction (°)	Cohesion Intercept (psf)
B1 @17-19'	Remolded to 90% of Maximum	27	350
B2 @10-16	Remolded to 90% of Maximum	34	250
B7 @4-5'	Undisturbed	17	150

MAXIMUM DENSITY & OPTIMUM MOISTURE CONTENT

ASTM 1557-70T METHOD A

SAMPLE	DESCRIPTION	Maximum Density (pcf)	Optimum Moisture Content
B1 @17-19'	Yellow-Brown, Clayey Very Gravelly Sand	117.3	14.
B2 @10-16'	Brown, Slightly Clayey Sandy Gravel	124.0	11.

EXPANSION TEST RESULTS

SAMPLE	B1 @ 17-19'	B2 @ 10-16'			
CONDITION	Air Dried Rem. @90%	Air Dried Rem. @90%			
INITIAL M.C (%)	2.3	4.3			
INITIAL DENSITY(pcf)	107.0	112.5			
FINAL M.C. (%)	19.6	16.0			
NORMAL STRESS (psi)	645	645			
EXPANSION (%)	2.7	0.3			

SOUTHERN CALIFORNIA TESTING LABORATORY, INC.
6909 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120

BY CHC	DATE 5/24/73
JOB NO. 310084	PLATE NO.

GRAIN SIZE ANALYSIS AND ATTERBURG LIMITS

SAMPLE			B1 @ 5-6'	B1 @ 17-19'	B2 @ 10-16'			
GRADATION (% FINER BY WEIGHT)	U.S. STANDARD SIEVES	6"	100	*See Note				
		4"	95					
		3"	83		100			
		2"	75		84			
		1½"	70		76			
		¾"	58		51			
		⅜"	53		39			
		#4	51	100	35			
		#8	47	94	32			
		#16	39	88	31			
		#30	33	82	29			
		#50	27	63	19			
		#100	24	46	10			
		#200	20	35	7			
	HYDROMETRY	.05mm						
		.005mm						
		.001mm						

LIQUID LIMIT						
PLASTIC LIMIT						
PLASTICITY INDEX						

UNIFIED CLASSIFICATION	CC	SC	GP/GC			

*Gradation performed on minus #4 material only.

Southern California

TABLE OF TEST RESULTS

BY CHC DATE 5/24/73

ROCK FILLED GRADING SPECIFICATIONS - GENERAL PROVISIONS

GENERAL INTENT:

The intent of these specifications is to establish procedures for clearing, compacting natural ground, preparing areas to be filled and placing and compacting fill soil to the lines and grades shown on the accepted plans. The recommendations contained in the preliminary soil investigation report and the attached special provisions are a part of the recommended grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

INSPECTION AND TESTING:

A qualified soil engineer shall be employed to inspect and test the earthwork in accordance with these specifications. It will be necessary that the soil engineer or his representative provide adequate inspection so that he may certify that the work was or was not accomplished as specified. It shall be the responsibility of the contractor to assist the soil engineer and to keep him appraised of work schedules, changes and new information and data so that he may make these certifications.

If, in the opinion of the soil engineer, substandard conditions are encountered, such as questionable soil, poor moisture control, inadequate compaction, adverse weather, etc., he will be empowered to either stop construction until the conditions are remedied or corrected or recommend rejection of the work.

Soil tests used to determine the degree of compaction will be performed in accordance with the following American Society for Testing and Materials test methods:

Maximum Density and Optimum Moisture Content - A.S.T.M. D-1557.

Density of Soil In-Place - A.S.T.M. D-1556-64.

PREPARATION OF AREAS TO RECEIVE FILL:

All vegetation, brush and debris shall be removed, piled and burned or otherwise disposed of. After clearing, the natural ground shall be scarified to a depth of 6", brought to the proper moisture content, compacted and tested to the minimum density specified in the special provisions or the recommendations contained in the preliminary soil investigation report.

When the slope of the natural ground receiving fill exceeds 20% (5 horizontal to 1 vertical), the original ground shall be stepped or benched. Benches shall be cut to a firm competent soil condition. The lower bench shall be at least 10 feet wide and all other benches at least 6 feet wide. The horizontal portion of each bench shall be compacted prior to receiving fill as specified hereinbefore for compacted natural ground. Ground slopes flatter than 20% shall be benched when considered necessary by the soil engineer.

FILL MATERIAL:

Materials placed in the fill shall be approved by the soil engineer and shall be free of vegetable matter and other deleterious substances. Granular soils shall contain sufficient fine material to fill the voids. The definition and disposition of oversized rocks, expansive and/or detrimental soils are provided in the special provisions. Expansive soils, soils of poor gradation or strength characteristics may be thoroughly mixed with other soils to provide satisfactory fill material, but only with the explicit consent of the soil engineer.

PLACING AND COMPACTION OF FILL:

Approved fill material shall be placed in areas prepared to receive fill in layers not to exceed 6 inches in compacted thickness. Each layer shall have a uniform moisture content in the range that will allow the compaction

efficiently applied to achieve the specified degree of compaction.

...ch layer shall be uniformly compacted to a minimum specified density with adequately sized equipment, either specifically designed for soil compaction or of proven reliability. The minimum degree of compaction to be achieved is specified in either the special provisions or the recommendations contained in the preliminary soil investigation report.

Field tests and inspections to check the degree of compaction of the fil will be taken by the soil engineer or his representative. The location and frequency of the tests shall be at the soil engineer's discretion. General, the density tests will be made at an interval not exceeding 2 f in vertical rise and/or 500 cubic yards of embankment.

SEASON LIMITS:

Fill shall not be placed during unfavorable weather conditions. When w is interrupted by heavy rain, filling operations shall not be resumed u the proper moisture content and density of the fill has been achieved. age resulting from weather shall be repaired before acceptance of work.

UNFORESEEN CONDITIONS:

In the event that conditions are encountered during the site preparati and construction that were not encountered during the preliminary soil vestigation, Southern California Testing Laboratory, Inc. assumes no re sibility for conditions encountered which differ from those conditions and described in the preliminary soil investigation report.

SPECIAL PROVISIONS

The minimum degree of compaction to be obtained in compacting natural ground and in the compacted fill shall be 90 percent.

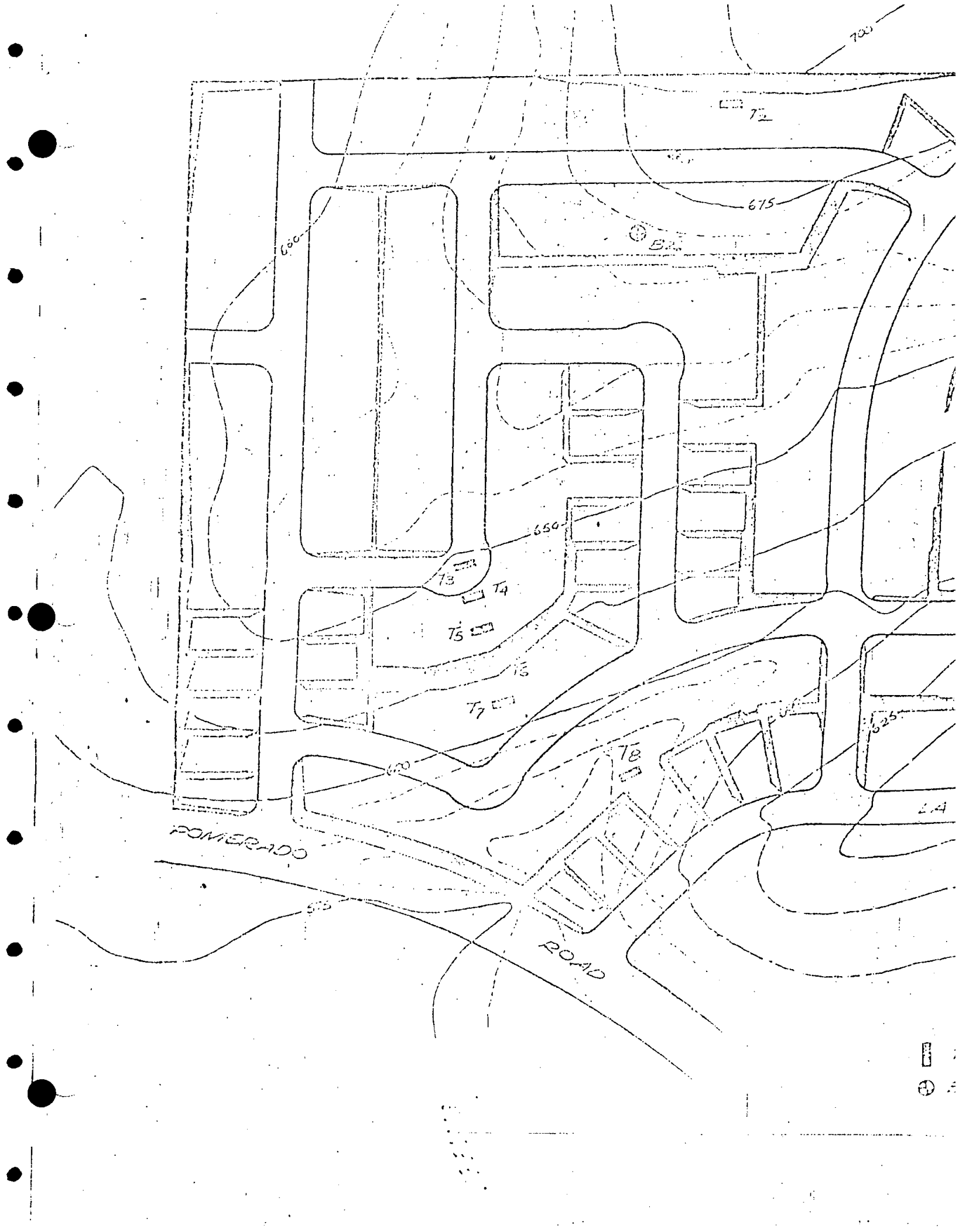
Detrimentally expansive soils is defined as soil which will swell more than 3 percent against a pressure of 150 pounds per square foot from a condition of 90 percent density and optimum moisture content to saturation.

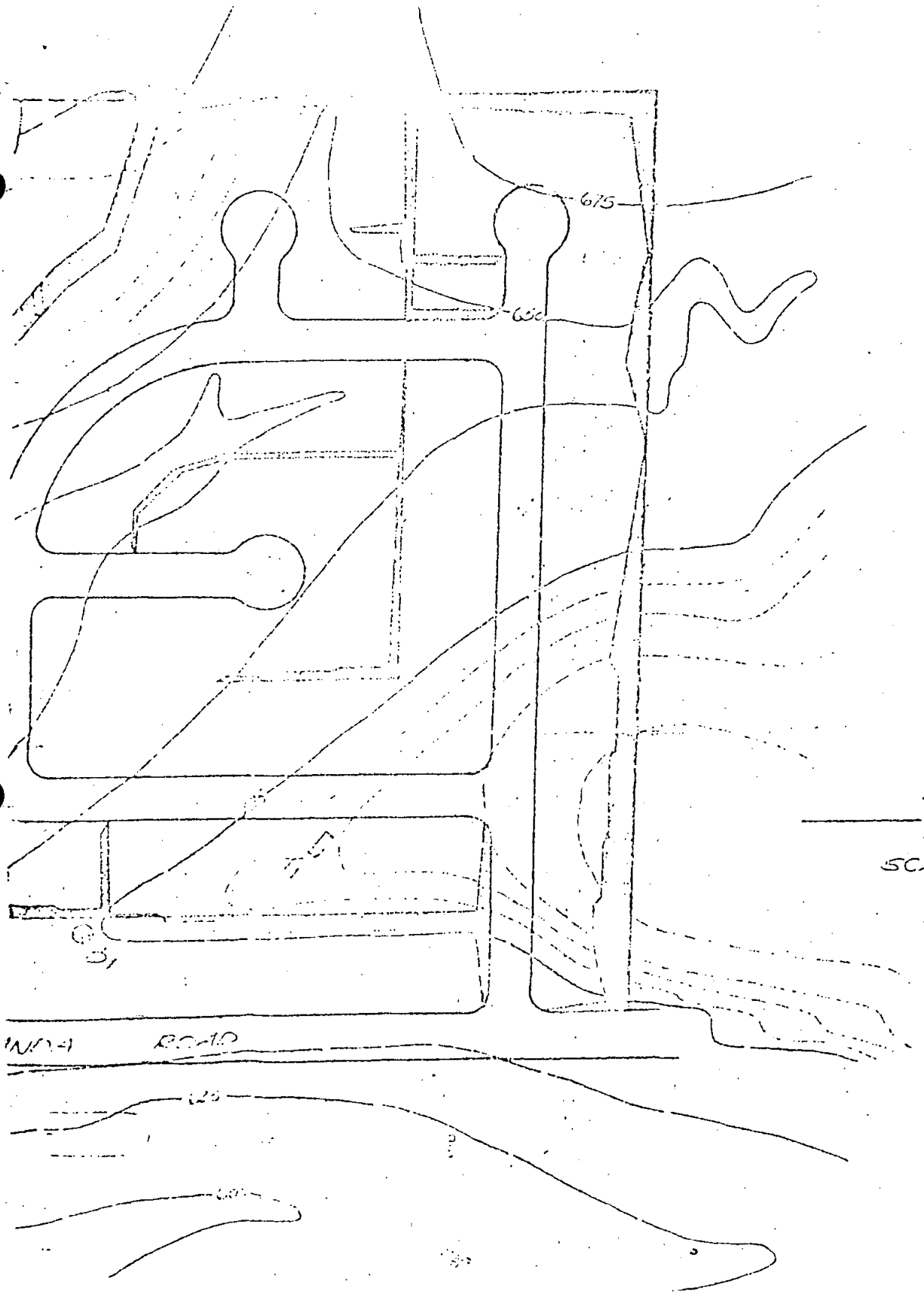
Oversized fill material is defined as rocks or lumps over six inches in diameter. At least 40 percent of the fill soil shall pass through a No. 4 U.S. Standard Sieve.

UNIFIED SOIL CLASSIFICATION CHART

SOIL CLASSIFICATION		GROUP SYMBOL	TYPICAL NAMES
I. COARSE GRAINED, More than half of material is larger than No. 200 sieve size.			
GRAVELS More than half of coarse fraction is larger than No. 4 sieve size but smaller than 3".	CLEAN GRAVELS	GW	Well graded gravels, gr... sand mixtures, little ... fines.
		GP	Poorly graded gravels, ... sand mixtures, little ... fines.
	GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, poorly ... gravel-sand-silt mixtu...
		GC	Clayey gravels, poorly ... graded gravel-sand, cl... mixtures.
SANDS More than half of coarse fraction is smaller than No. 4 sieve size.	CLEAN SANDS	SW	Well graded sand, grave... sands, little or no fi...
		SP	Poorly graded sands, gr... sands, little or no fi...
	SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, poorly gr... sand and silt mixtures.
		SC	Clayey sands, poorly ... sand and clay mixtures.
II. FINE GRAINED, More than half of material is smaller than No. 200 sieve size.			
SILTS AND CLAYS		ML	Inorganic silts and v... fine sands, rock flour, ... silt or clayey-silt-sa... mixtures with slight ... icity
	Liquid Limit less than 50	CL	Inorganic clays of low ... medium plasticity, gra... clays, sandy clays, si... clays, lean clays.
		OL	Organic silts and org... silty clays of low pl...
	SILTS AND CLAYS	MH	Inorganic silts, mica... or diatomaceous fine ... or silty soils, elast... silts.
	Liquid Limit greater than 50	CH	Inorganic clays of hi... plasticity, fat clays.
		OH	Organic clays of medi... to high plasticity.
HIGHLY ORGANIC SOILS		PT	Peat and other highly ... organic soils.

SOUTHERN CALIFORNIA
TESTING LABORATORY


700
675
650
625
600
575
T2
T3
T4
T5
T6
T7
T8
POMERADO
ROAD



1 LOCATION

LOCATION

SOUTHERN CALIFORNIA TESTING LABORATORY	BALDWOOD PEOPLE FONTANA, CALIFOR
PLOT PLAN	BY M.S. O'HAYAN / MAY 24
	JOB 310034 / PLATE

B. BIOLOGICAL SURVEY

Biological Survey of Poway Woods, a 48.8 acre parcel about La Manda and Pomerado Roads, Poway, San Diego County, California

Prepared for

Grabhorn Engineering Corporation

7364 El Cajon Boulevard

Suite 206

San Diego, California

Prepared by

Pacific Southwest Biological Services

30 July 1976

Appendix

METHODS

The Poway Woods subdivision, a 48.8 acre parcel about the intersection of La Manda and Pomerado Roads, was surveyed during the afternoon of 29 July 1976 by John P. Rieger and R. Mitchel Beauchamp. The survey was done entirely on foot, with 60% of the site visited directly. Zoological observations were aided by the use of 10 X 50 power binoculars. All identifications were made on the site. The weather was partly cloudy with an air temperature of 29° C. Nomenclature conforms with the following texts: vegetation, Thorne (1976); flora, Munz (1974); avifauna, A.O.U (1957) and A.O.U. (1973); reptiles, Stebbins (1966); and mammals, Jones, Jr. (1975).

RESULTS

Botanical

The site was found to have both disturbed and natural vegetation. Approximately 45% of the site is covered by disturbed, ruderal or weedy vegetation (Figure 1). Wild Oats (Avena barbata) and Tarweed (Hemizonia paniculata) comprise the more abundant species of this disturbed plant association. A drainage through the middle of the site has an associated mesic flora which is also weedy in nature. Saltgrass (Distichlis spicata) and Beardgrass (Polypogon monspeliensis) are abundant along the moist creek bank.

The Coastal Sage Scrub on the site is dominated by Flat-top Buckwheat (Eriogonum fasciculatum) and California Sagebrush (Artemisia californica), but in exposed areas, with rocky substrate, is represented by low annuals and Coast Barrel Cactus (Ferocactus viridescens).

An interesting edaphic relationship on the site is reflected by the vegetative cover. The entire western portion of the site is underlain by Diablo Clay and here the plant cover is mainly non-native grasses. Most probably this soil type supported native grasslands in pre-Columbian times. The mima mound/vernal pool-associated Olivenhain Cobbly Loam underlies the western belt of Coastal Sage Scrub on the site. A few desiccated, remnant vernal pool sites were observed here but none of the associated endemic plant species were found. The remainder of the site is underlain by more inclined Olivenhain Cobbly Loam and the vegetation is more open and often of a disturbed nature on this soil.

The floral composition of the site (Table 1) is characteristic of this region of the central coastal plane of San Diego County. One-third, 18 taxa, of the plants listed are non-native and indicate the degree of disturbance in portions of the site. The total floral count (55 taxa) is low due to the time of the survey. This count represents about only 65% of the total possible site flora.

Zoological

Birds. A total of 8 species of birds were observed on the site (Table 2). Of particular interest is the Golden Eagle and Red-tailed Hawk which were seen flying overhead. The limited amount of small mammals on the site could provide only a small portion of the food source for these large birds, relative to the larger, undeveloped tracts of land adjacent to the site.

All breeding activity had been completed on the site at the time of this survey; however, the number of certain species and the discovery of an old nest indicate that the site is able to support resident populations.

Bird species which probably nest on the site include Mourning Dove, Mockingbird, Loggerhead Shrike, and Western Meadowlark. The species are common in San Diego County and do not represent a unique assemblage of species.

The small stand of eucalypts serves to attract birds to the site. Several woodpecker holes can be seen on the trunk of one of the larger trees. Also, some raptors may roost in these trees for brief periods of time.

Mammals. Several small mammals can be expected to occur on the site. Most commonly observed were the tracks of the Brush Rabbit. One individual each of the Black-tailed Jack Rabbit and the California Ground Squirrel were noted on the site. In addition to these species, several individuals of the Agile Kangaroo Rat (Dipodomys agilis) and Deer Mouse (Peromyscus maniculatus) are expected on the site since these were trapped in areas immediately to the east and numerous active burrows were noted on the site.

No coyote scat or tracks of other carnivores were observed on the site. The adjacent residences and modified condition of the surrounding lands may be largely responsible for this situation.

Reptiles and Amphibians. No species of either of these vertebrate groups were observed on the site. Populations of the Western Fence Lizard (Sceloporus occidentalis) would be expected on the site since this is a very common species in the area. No significant number of other species of these groups are expected on the site. Common snake species normally encountered in the area include Gophersnake (Pituophis melanoleucus) and Gartersnake (Thamnophis couchi hammondi).

TAXA OF RARE OR OTHERWISE-DESIGNATED STATUS

Zoological

No rare or endangered species were observed or are expected on the site. The Loggerhead Shrike is listed on the Audubon Blue List; however, this species is not considered to be dwindiling in San Diego County as in other parts of the country.

Botanical

Three plant species observed on the site are considered rare or otherwise by various agencies.

Ferocactus viridescens The Coast Barrel Cactus occurs on two places on the site (Figure 1). Density varies from 0.2 to 4 plants/ m^2 within the populations. Ferocactus viridescens is presently being proposed as Endangered by the U.S. Fish and Wildlife Service (Greenwalt, 1976) and its presence on the site could be of significant consequence if federal presence is involved in any manner with the subdivision, i.e. FHA or VA.

Dudleya variegata The San Diego Hasseanthus was detected at one place on the site. About 25-50 plants are involved in an area of about 10 m^2. This perennial herb is listed as Rare and Endangered by the California Native Plant Society (Powell 1974), a listing with, as yet, no legal status.

Selaginella cinerascens The San Diego Spike-Moss occurs on open, dry slopes of the site. Its status is listed as "uncertain" in the Native Plant Society listing.

LITERATURE CITED

A.O.U. 1957. Checklist of North American Birds. American Ornithologists' Union. 691 pp.

A.O.U. 1973. Checklist of North American Birds. Thirty-second Supplement. Auk 90:411-419.

Greenwalt, L.A. 1976. Endangered and Threatened Species, Plants. U.S. Fish and Wildlife Service, Department of the Interior. Federal Register 41(117):24524-24572, Wednesday, June 16, 1976.

Jones, J.K., Jr., D.C. Carter, and H.H. Genoways. 1975. Revised Checklist of North American Mammals, North of Mexico. Occas. Pap. Mus. Texas Tech. Univ. 28:1-14.

Munz, P.A. 1974. A Flora of Southern California. University of California Press, Berkeley. 1086 pp.

Powell, W.R. 1974. Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society, Special Publ. No. 1, 56 pp.

Stebbins, R. 1966. A Field Guide to Western Reptiles and Amphibians. Houghton-Mifflin Co., Boston. 279 pp.

Thorne, R.F. 1976. The Vascular Plant Communities of California. pp. 1-31, in Symposium Proceedings: Plant Communities of Southern California, June Latting, ed., California Native Plant Society, Special Publ., No. 2 164 pp.

Figure 1. Vegetation and Rare Plant Map of Poway Hills

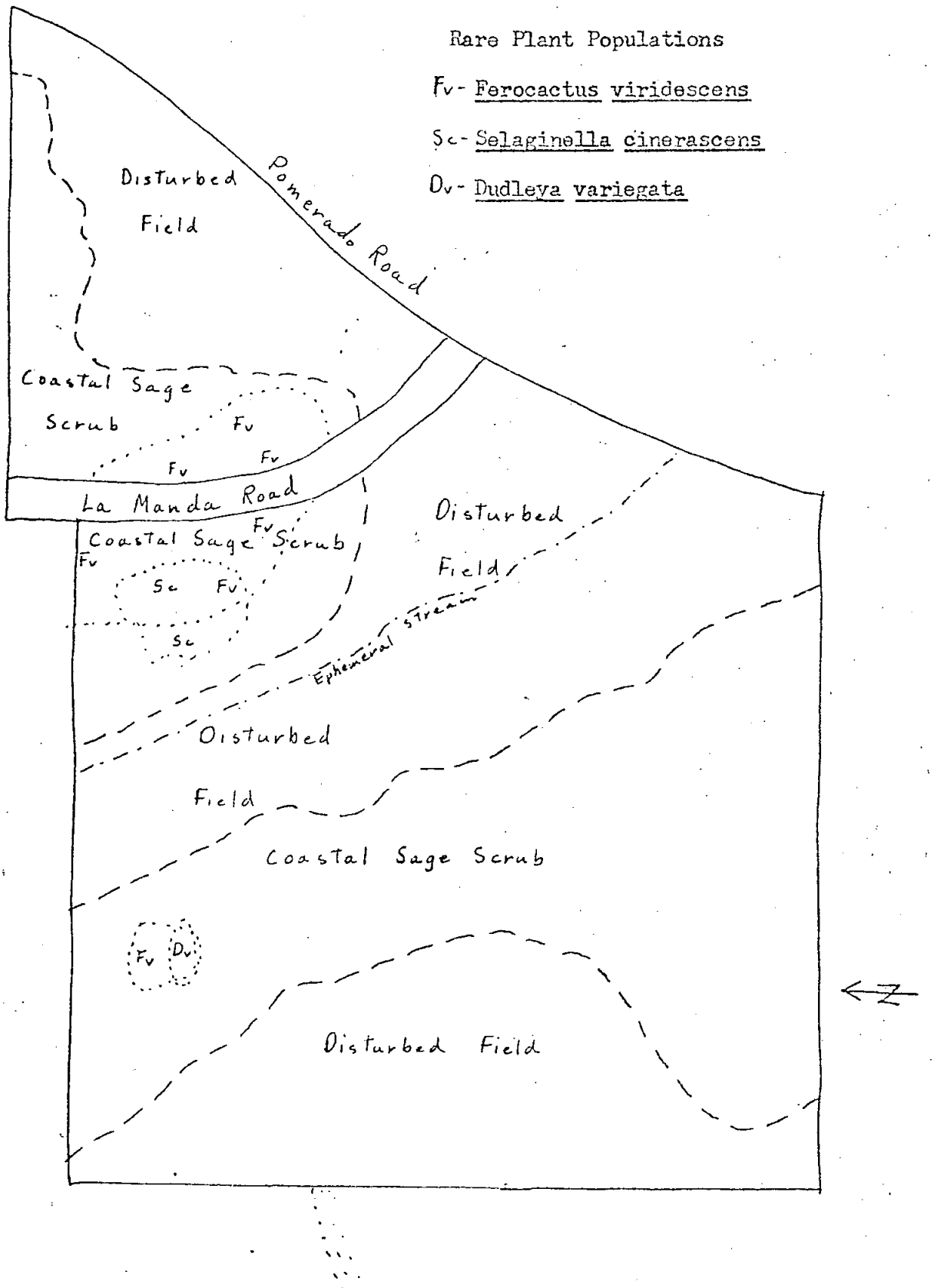


Table 1. Annotated Floral Checklist of Poway Woods Subdivision

Annotation Legend: 1-Disturbed Areas, 2-Coastal Sage Scrub, 3-Ephemeral Stream Area, *-denotes non-natives

*Amaranthus hybridus L. 1

Ambrosia psilostachya DC. var. californica (Rydb.) Blake. 1,3

Artemisia californica Less. 2

Asclepias fascicularis Dcne. in A. DC. 3

*Atriplex semibaccata R. Br. 1

*Avena barbata Brot. 1,2,3

Baccharis pilularis DC. ssp. consanguinea (DC.) C.B. Wolf. 3

Bloomeria crocea (Torr.) Cov. var. crocea 2

*Brassica nigra (L.) Koch. 1

*Bromus diandrus Roth. 1,3

*Bromus mollis L. 1,3

*Bromus rubens L. 1,3

Calycadenia tenella (Nutt.) T.& G. 2

*Centaurea melitensis L. 1

Chlorogalum parviflorum Wats. 2

Corethrogyne filaginifolia (H.&A.)Nutt. var. virgata (Benth.) Gray. 2

Distichlis spicata (L.) Greene var. spicata 1,3

Dodecatheon clevelandii Greene ssp. clevelandii 2

Dudleya pulverulenta (Nutt.) Britt. & Rose. 2

Dudleya variegata (Wats.) Moran. 2

Eremocarpus setigerus (Hook.) Benth. 1

Eriogonum fasciculatum Benth. ssp. fasciculatum 2

*Erodium cicutarium (L.) L'Her. 1

*Eucalyptus polycarpa F. v Muell. 1

Ferocactus viridescens (Nutt.) Britt.& Rose. 2

Table 1. Annotated Floral Checklist of Poway Woods Subdivision (continued)

Galium angustifolium Nutt. ssp. angustifolium 2

*Gastridium ventricosum (Gouan) Schniz & Thell. 1,3

Gnaphalium californicum DC. 2,3

Grindelia robusta Nutt. 1

Haplopappus squarrosus H.&A. ssp. grindelioides (DC.) Keck 1,2

Haplopappus venetus (HBK) Blake ssp. oxyphyllus (Greene) Hall. 1,2

Hemizonia paniculata Gray ssp. paniculata 1

Heterotheca grandiflora Nutt. 1

Holocarpha virgata (Gray)Keck ssp. elongata Keck. 1

*Hordeum glaucum Steud. 1,3

*Lactuca serriola L. 1

*Lamarckia aurea (L.) Moench. 1

*Lolium perenne L. ssp. perenne 1,3

Malosma laurina (Nutt.) Nutt. ex Abrams. 2

Melica imperfecta Trin. 2

Microseris linearifolia (Nutt.) Sch.-Bip. 1

Opuntia littoralis (Engelm.) Ckll. var. littoralis 2

Opuntia prolifera Engelm. 2

*Polypogon monspeliensis (L.) Desf. 3

Rhamnus crocea Nutt. in T.& G. 2

*Rumex crispus L. 3

Salvia apiana Jeps. 2

*Salsola iberica Sennen & Pau 1

Sambucus mexicana Presl. 2

Sanicula crassicaulis Poepp. ex DC. 3

Selaginella cinerascens A.A. Eaton 2

Table 1. Annotated Floral Checklist of Poway Woods Subdivision (continued)

Sisyrinchium bellum Wats. 1,2

Stipa cernua Steb. & Love. 2

Stylocline gnaphalioides Nutt. 1,2

Vulpia myuros (L.) K.C. Gmelin var. hirsuta Hack. 1

Table 2. Animals Observed at Poway Woods Subdivision site, 29 July 1976

BIRDS

		Individuals Observed
Red-tailed Hawk	Buteo jamaicensis	1
Golden Eagle	Aquila chrysaetos	1
Mourning Dove	Zenaida macroura	3
Cliff Swallow	Petrochelidon pyrrhonota	4
Mockingbird	Mimus polyglottos	1
Loggerhead Shrike	Lanius ludovicianus	1
Western Meadowlark	Sturnella neglecta	6
House Finch	Carpodacus mexicanus	4

MAMMALS

Brush Rabbit	Sylvilagus bachmani
Black-tailed Jack Rabbit	Lepus californicus
California Ground Squirrel	Spermophilus beecheyi

C. ARCHAEOLOGY SURVEY

Archaeological Field Investigation of

Poway Woods

Prepared for:

Grabhorn Engineering Corporation
7364 El Cajon Blvd.
San Diego, California 92115

Prepared by:

Stanley R. Berryman
Stanley R. Berryman
Berryman Archaeological Consultants
1336 Oakdale Ave.
El Cajon, California 92021

3 August 1976

Contents:

Abstract:

On 27 July, 1976, an archaeological survey was conducted on a 48.8 acre parcel located north of Poway, California. This work was accomplished by means of a series of transects. The results were positive in that a number of isolated artifacts and a site just off the subject property were found. This report describes the site and makes recommendations for mitigating any impacts.

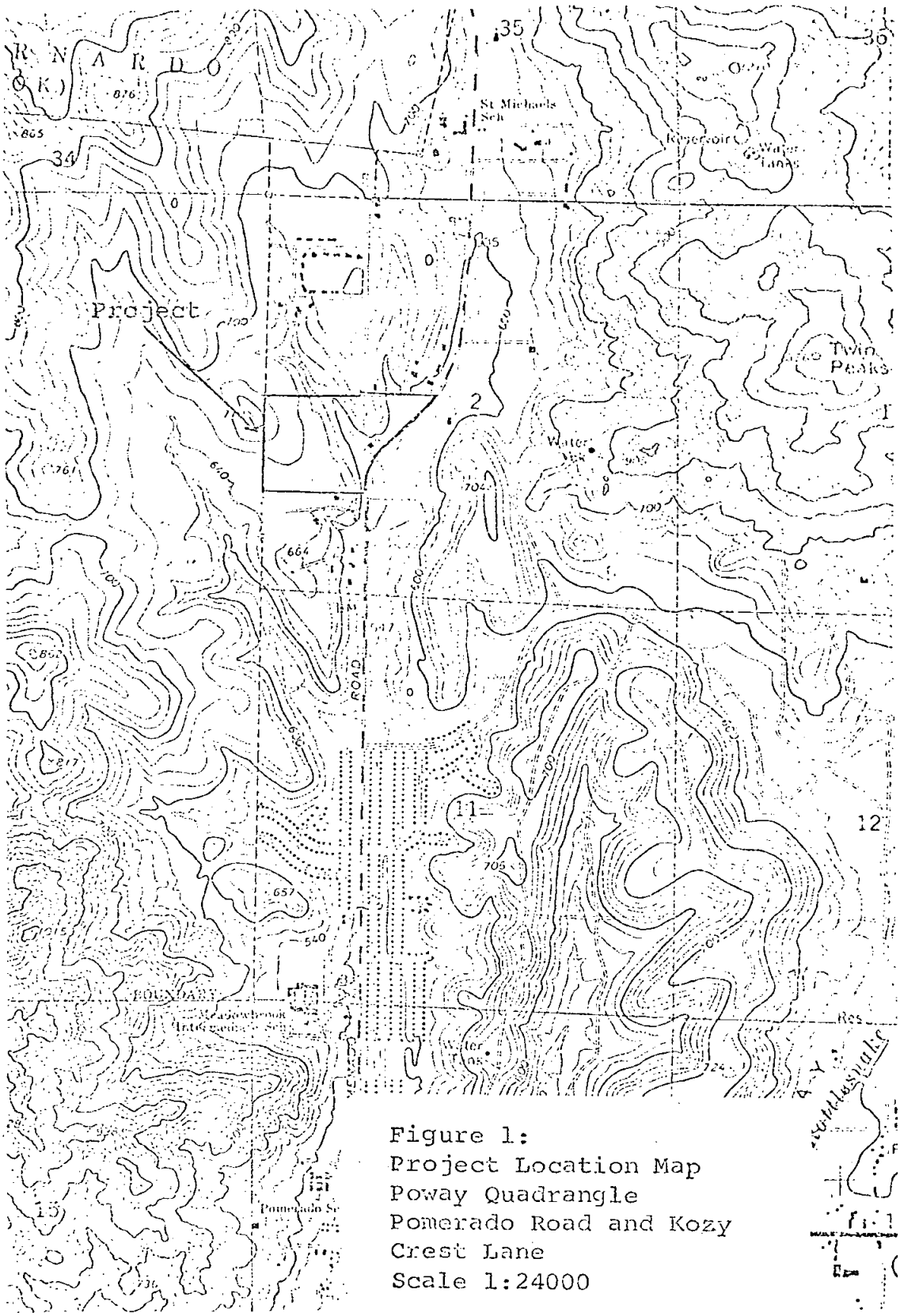


Figure 1:
Project Location Map
Poway Quadrangle
Pomerado Road and Kozy Crest Lane
Scale 1:24000

Introduction:

The Poway Woods Development Project is located at the intersection of Pomerado Road and Kozy Crest Lane, north of the Community of Poway, California. Legally, the parcel is contained within Lots 9, 10, 11, and 12 of Block A, Map #536, Poway, California. The area is within a portion of Section 2, Township 14 South, Range 2 West, San Bernardino Base and Meridian Map (Figure 1). The proposed project is on a 48.8 acre parcel which is to be developed into 114 lots. Planning designs include eight (8) streets with access from Pomerado Road (figure 2).

Currently, the property is undeveloped. The land to the north and south have single family residences. The property to the east and west are still undeveloped.

On 27 July, 1976 approximately five (5) man hours were expended by Stanley R. Berryman while conducting an archaeological survey of the property. Such a study was accomplished by means of east/west transects, until

the entire parcel was covered. The results of the on-foot-survey were positive in that a number of isolated artifacts were found on the subject property. Along with the material found on Poway Woods Project, an archaeological site was noted just west of the parcel on Rancho Penasquitos land. A few artifacts from this site have washed onto the Poway Woods parcel.

Project Setting:

Poway Woods is a residential development that is situated on a 48.8 acre parcel, north of Poway, California. The area is irregularly shaped with the long axis oriented in an east/west direction. Topographically, the area consists of portions of two ridges that comprise a series of marine terraces. These ridges are separated by a broad, generally steep-sided gulley. Elevations for the area range from a high of 650 feet to a low of 580 feet.

Soil on the property is made up of a shallow loam that contains numerous cobbles. It has been formed from the base conglomerate that underlies the area. Soil color ranges from a brown to a dark grey-brown. The cobbles that were noted on the property would be ideal for tool manufacture.

Biological Environment:

The Poway Woods Property is covered by a dense growth of short grasses and wild oats. In most places the ground is not readily visible due to the thick undergrowth. In addition to the annual grasses, the archaeologist noted the presence of the following major species:

Buckwheat	*Eriogonum fasciculatum*
Wild oats	*Avena fatua*
Laurel sumac	*Rhus laurina*
Chamise	*Adenostoma fasciculatum*
Barrel cactus	*Echinocactus acanthodes*
various annual grasses	

Animals noted during the survey included:

Cottontail rabbits	*Sylvilagus auduboni*
Jack rabbits	*Lepus californicus*
Quail	*Lophortya californicus*

Ethnobotany:

The major vegetation families noted for the subject property have recorded use by the Late Archaic peoples. Three major works for this area of California contain descriptions of plant useages for the Late Archaic people (Hedges 1967, Bean and Saubel 1972, Shipek 1968), and will be used to tabulate the known plant useages for this parcel.

TABLE 1

COMMON BOTANICAL USES FOR THE AREA

Plant Name	Ethnobotanical Use	Source Cited
buckwheat	food medicinal	Bean + Saubel: 72 Hedges: 25
wild oats	food	Bean + Saubel :46 Hedges: 50
laurel sumac	food medicinal	Bean + Saubel: 131-132 Hedges: 34
chamise	food medicinal small tools construction material	Bean + Saubel:29
barrel cactus	food cooking vessel	Bean + Saubel:67-68,12-13

Review of the Culture History :

The question of how long man has occupied the Southern California area has not yet been resolved. Dates for such an occupation span range from an conservative time period of 11,000 years (Moriarty 1969, Meighan 1965, Warren 1967) to more extreme dates of 30-40,000 years (Bada 1974). Until further examination of the available data and new excavations in the Southern California area, the question of how long man has been in this area will remain unanswered. What is known is that during man's occupation span three separate cultural horizons were present: the Paleo-Indian, the Early Archaic, and the Late Archaic Horizons. Each stage of culture represents different land-use patterns and different types of environmental exploitations.

The earliest firmly documented inhabitants of San Diego County are the Paleo-Indians of the San Dieguito Complex. The origins either centered around the Great Basin area (Moriarty 1969, Warren and True 1966, Warren 1967, Meighan 1965) or from the inter-montane regions of California

(Davis 1975). What ever the starting point, the San Dieguito moved into the area around 10,000 to 11,000 years ago.

The basic economic pattern for this group was one of gathering and hunting, exemplified by a pattern of seasonal transhumance (Davis 1963). Typical tools included plano-convex scrapers, leaf-shaped points, crescents, knives and choppers (Davis 1969, Rogers 1966, Warren and True 1961).

Probable changes in the environment (Warren and True 1961) and unknown cultural factors led to changes in the San Dieguito Horizon. The intrusion of cultural elements from the desert (Campbell and Campbell 1935) and the shift of sea levels (Fairbridge 1958), led to the Early Archaic Horizon. Various Desert Tradition peoples (Wallace 1962) entered the area and formed large bands and population centers around the coastal outlets and lagoons (Warren and True 1961). This pattern of exploitation has come to be known as the La Jolla Complex.

The transition from the Paleo-Indian to the Early Archaic Horizon is not as easily understood along the coastal areas. As yet there are two defined complexes for this area: the more marine-oriented La Jolla Complex (Rogers 1966) and a more inland oak and pinyon exploitation by the Pauma Complex (True 1958). As yet the two complexes have not been clearly defined and could possibly be the same group of people exploiting two different types of resources.

New changes in the environment caused silting in the coastal lagoons between 5000 and 3000, which forced the large population centers to break down into smaller groups and move inland (Warren and True 1961, Wallace 1962, Rogers 1939). Again, there is a major econimic shift from a heavy seasonal reliance on shellfish to one where the emphasis is on milling and hunting.

Radiocarbon dates indicate a general land occupation of 7500 BP to approximately 3000 BP, when the first intrusion of Pre-Ceramic Yuman speaking peoples began (Moriarty 1966, Wallace 1955). By 2000 BP, the amalgamation of the two groups had produced a third cultural body: the Kumeyaay for Southern San Diego County.

A basic change in technology was evident between the Early and Late Archaic Horizon peoples. Both groups practiced a hunting and gathering subsistence, with the emphasis placed on gathering. The later people did not have as rich a marine environment to drawn from, but they did have the technology to exploit the available acorn and pinyon groves. The Late Archaic peoples used granitic bedrock areas for large milling stations, setting up numerous special resource camps to utilize the specialized resources available to them.

Tool assemblage for this period is characterized by small finely worked points, shaped and unshaped manos, portable and permanent metates, choppers, scrapers, bone awls, steatite charm stones and the use of pottery (Moriarty 1966).

In summary, the prehistory of San Diego County is associated with the migrations of populations from the interior valleys and basins of the east. The earliest and widely accepted cultural manifestation for this area is the San Dieguito Complex, represented throughout coastal and inland areas by temporary camp sites and work stations.

The La Jolla Complex in San Diego is associated with the deposition of extensive shell middens, along many of the estuaries and sea coasts. By 2000 BP, the La Jolla Complex was giving way to the Late Archaic peoples, or the Kumeyaay Indians for Southern San Diego area.

Archaeological Record Searches:

An archaeological record search was conducted at both the Museum of Man and at the San Diego State University Anthropology Laboratory. Both insitutions recorded sites within the area of the Poway Woods Property.

The San Diego Museum of Man indicated the presence of the following sites in the area of the subject property (figure 3):

W:461 : San Dieguito II, Amaragosa site
W:618 : San Dieguito flake scatter
W:590 : Kumeyaay campsite

San Diego State University recorded the following sites (figure 4):

SDi 11: Culture unknown, associated pictographs
Cal:E:4:65 : San Dieguito flaking station
Cal:E:4:31 : Protohistoric surface site

Survey Technique:

The archaeologist began the field survey just south of La Manda Drive (figure 1). From this point he walked in a northwest direction, up the gulley to the northern boundary. It was from this area that the east/west transects were initiated. These transects were used to field check the entire parcel (48.8 acres). It was during the course of these transects that the archaeological site west of the Poway Woods-Rancho Pensasquitos boundary was noted. Also found during these traverses were the previously mentioned isolated artifacts.

Archaeological Site:

Much of the archaeological materials found on the subject parcel appears as isolated artifacts and consists mainly of porphoritic-base flakes. The site west of the Rancho Penasiquitos and Poway Woods boundary (figure 2) is located on the downslope side of a knoll. It is estimated to measure approximately 115 feet north/south by 100 feet east/west. The vegetation on the Poway Woods side is a thick cover of wild oats, while the other side, off the property has been plowed. Soil coloration for both areas consists of a dark grey-brown. The site located off the property consists of 50+ flakes, 2 scrapers, 1 hammer, and 4 manos. Most of the artifacts originated from a phorphoritic base rock. Artifacts on the Poway Woods property consisted of 4 flakes and 1 scraper, again of phorphoritic origins. The archaeologist conducted a careful study of the Poway Woods portion of the site and could not locate any further artifactual materials. Further, since the property on the Penasquitos side has been plowed, it is very probable that the artifacts located on the Poway Woods side are the results of soil erosion and plowing activities off the property.

Inspection of the area did not reveal the presence of midden soil, although a posthole series was not conducted to confirm this. Rodent burrows were checked with no midden soil or artifactual materials found.

No cultural affliation has been placed on the site materials, since no true diagnostic tools or artifacts were found. Because four manos were found within the site complex one could assign either a Late or Early Archaic date to the materials. Taking into account the record searches conducted for the area and the general Poway history, some conclusions can be made concerning the site materials found off the property. If the site area is considered a Late Archaic (Kumeyaay) Horizon, then it can be connected with the SDM-213 complex, west of the Poway Woods property. This site was originally described by Malcolm Rogers in 1921 as a major village. The site area off the Poway Woods property is close enough to W-213 to be a special resource site or campsite, with W-213 as a center. If the area is considered to be Early Archaic in time, then it would provide a link in defining this cultural horizon's use of the Poway Valley, data on that has not been adequately collected.

The three sites recorded by both institutions could provide some type of linkeage with the site found off the subject property. Both places record sites from the Early and Late Archaic Horizons.

Impacts Resulting from the Proposed Action:

The isolated artifacts found on the Poway Woods Property will be destoryed as a result of the construction activity. The site west of the Poway Woods-Rancho Penasquitos boundary should not be directly impacted. The site may be indirectly impacted by increased activity in the general area.

The known sites in the surrounding areas should not be affected by the planned development of Poway Woods.

Mitigating Measures:

No mitigating measures are recommended for the isolated artifacts. Since only a few artifacts were located on the subject property further study is not recommended. The larger site area, located off the property is fenced off from the Poway Woods property. In order to protect this site area appropriate signs should be posted citing relevant laws on the protection of archaeological sites. Along with the posting of the property, the site area has been recorded with both the San Diego State University and San Diego Museum of Man (figure 5).

Sources Cited:

Bada, J.
1975 New Evidence for the Antiquity of Man in North America. Science. 184:791-793.

Bean, L. and K. Saubel
1972 Temalpkah: Cahuilla Indian Knowledge and Useage of Plants. Malki Museum Press.

Campbell, E. and W.H. Campbell
1935 The Pinto Basin Site. Southwestern Museum Papers #9.

Davis, E.L.
1969 The Western Lithic Co-Tradition. San Diego Museum of Man, Papers #6.
1975 Personal communications.

Fairbridge, R.
1958 Dating the Latest Movements of the Quaternary Sea Level. Transactions of the New York Academy of Sciences. Series II:20:6:471-472.

Hedges, K.
1967 Santa Ysabel Ethnobotany. Unpublished manuscript, on file at San Diego Museum of Man.

Meighan, C.
1954 A Late Complex in Southern California Prehistory. Southwestern Journal of Anthropology. 10:2:255-264.
1965 Pacific Coast Archaeology. VII Congress of International Association for Quaternary Research. 709-720.

Moriarty, J.R., G. Shumway, C.N. Warren
1959 Scripps Estates 1. San Diego Foundation, La Jolla.

Moriarty, J.R.
1966 Cultural Phase Divisions Suggested by Typological Change, Coordinated with Stratigraphically Controlled Radiocarbon Dates. Anthropological Journal of Canada. 4:20-30.

1969 The San Dieguito Complex: Suggested Environmental and Cultural Relationships. Anthropological Journal of Canada. 7:3:2-18.

Rogers, M.J.
1921 Field Descriptions W-213. On file at San Diego Museum of Man.
1939 Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas. San Diego Museum of Man, Papers #3.
1945 An Outline of Yuman Prehistory. Southwestern Journal of Anthropology. 1:2.
1966 Ancient Hunters of the Far West. Union-Tribune Publishing Company, San Diego.

Shipek, F.
1968 The Autobiography of Delfina Cuero: A Diegueno Indian. Malki Museum Press.

True, D.L.
1958 An Early Complex in San Diego County. American Antiquity. 23:3:255-261.

Wallace, W.
1955 A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology. 11:214-230.
1962 Prehistoric Cultural Development in the Southern California Deserts. American Antiquity. 28:2:72-180.

Warren, C.N.
1967 The San Dieguito Complex: A Review and Hypothesis in America. American Anthropologist. 32:2:168-185.

Warren, C.N., D.L. True, A. Eudey
1961 Early Gathering Complexes of Western San Diego County. UCLA Archaeological Survey Annual Report 1960-1961. 1:1-106.

APPENDIX

SAN DIEGO MUSEUM OF MAN

1350 El Prado, Balboa Park, San Diego, California 92101, Telephone (714) 239-2001

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: Grabhorn Engineering Corp. - Richard G. Grabhorn

Date of Request: 10 March 1976 (X)Letter ( )Telephone ( ) In Person

Date Request Received: 11 March 1976 (X)Map Received (X)Map Returned

Name of Project: Poway Woods, WO: 108-006

( ) The Museum of Man files show no recorded sites for the project area.

(X) The Museum of Man files show the following sites ( )within (X)in the vicinity of the project area.

Site No. W-461 Culture(s): San Dieguito II, "Amargosa"

Description: Milling station with grinding slicks, cobble chopper, mano fragments, flakes and flake tools (recorded by Ryzdynski/May).

Site No. W-590 Culture(s): Kumeyaay

Description: Camp site with manos, mano fragments, flakes, and sherds (recorded by Carrico).

Site No. W-618 Culture(s): San Dieguito

Description: Scatter of flakes, flake fragments, and 1 core (recorded by Carrico).

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Please note: The project area may contain archaeological resources in addition to those noted above. This report is made from San Diego Museum of Man files only and may not include data pertaining to localities other than those covered in previous Museum of Man surveys or gathered by other institutions or by individuals.

Record check by: Grace Johnson -22-

Date: 12 March 1976 Signed: Lowell E. English

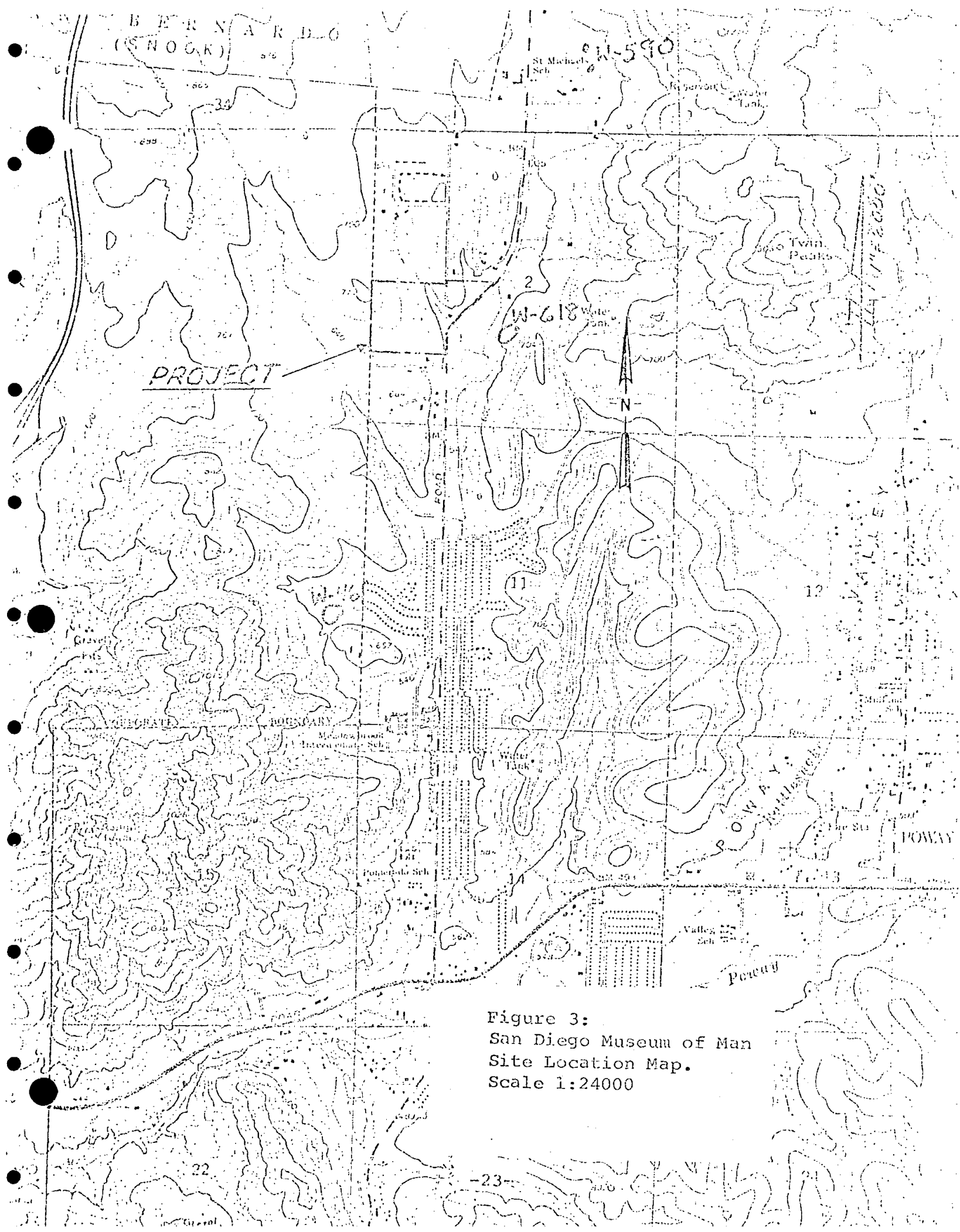


Figure 3:
San Diego Museum of Man
Site Location Map.
Scale 1:24000

SAN DIEGO STATE UNIVERSITY

Department of Anthropology 5402 College Avenue/ San Diego, California 92182

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: Grabhorn Engineering Corp.

Date of Request: March 10, 1976 (x) Letter ( ) Telephone ( ) In Person

Date Request Received: March 15, 1976 (x) Map Received (x) Map Returned

Name of Project: Poway Woods

( ) The San Diego State University files show no recorded sites for the project area.

(x) The San Diego State University files show the following sites ( ) within (x) in the vicinity of the project area.

Site No. SDi-11 Culture(s): unknown

Description: pictographs on boulder, elev. approx. 750'

Site No. Cal:E:4:31 Culture(s): Protohistoric unknown

Description: 2 acre surface; manos, flakes, Tizon brownware pot sherds; site almost certainly has been destroyed by construction

Site No. Cal:E:4:65 Culture(s): possibly San Dieguito

Description: 50' X 60' surface: heavily patinated large flakes (site discovered & reported by R. Carrico of WESTEC Services)

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

NOTE: This report includes only that information available from the San Diego State University files and may not include data on file at other institutions. A lack of sites recorded in our files cannot be taken as assurance of the absence of archaeological materials. If it should occur that any cultural remains are encountered during the course of construction, a qualified archaeologist should be notified.

Record check by: [signature]

Date: March 15, 1976 Signed: [signature]

Figure 4:
San Diego State University
Site Location Map
Scale 1:24000

Archaeological Site Record
Figure 5

Organization: Berryman Archaeological Consultants Field #
Project: Poway Woods SDMM #
Archaeologist(s): Stan Berryman SDSU #
Site Location: Poway, Ca. Elevation: Appx. 650' Roads:
Topography: The site is on the down slope side of a small knoll
Natural Features: none
T. 14s R. 2w Sec. 2 ¼ ne ¼ ne ¼ sw Quadrangle Poway State Ca. County S.D.
Site Dimensions: Length 115' N/S Width 100' E/W Shape Oval Heigth
Description: This site is located in a plowed field. There are numerous artifacts visible on the surface. The plowing has probably smeared the site. At the present time there is little vegetation on the surface area.
Other site in vicinity:
Previous excavation, Vandalism, or Disturbance: Plowing

Surface Evidence: indicate approximate amounts

Artifacts:
- 1 Hammerstone
- ___ Core
- ___ Flake
- 3 Scraper
- ___ Blade
- ___ Projectile
- ___ Portable Metate
- 4 Mano
- ___ Pestle
- ___ Potsherd
- ___ Undesignated Shell
- ___ Osteological
- ___ Charcoal/ash
- ___ Retouched tools
- ___ Utilized flakes

Others:
50± Flakes

Features:
- ___ Roasting Pit/ Hearth
- ___ Rock shelter
- ___ Mound/pit
- ___ Rock art
- ___ Burial

Stacked rock:
- ___ enclosure
- ___ wall
- ___ alignment
- ___ circle
- ___ cairn

Ground Stone
- ___ basin(oval)
- ___ basin(round)
- ___ mortar
- ___ slick

Others:

Cultural Horizon
- ___ Historic
- ___ Late Archaic
- ___ Early Archaic
- ___ Paleo-Indian
- X Unknown

Probable Cultural Affiliation: ___

Site Type:
- ___ Village
- X Camp
- ___ Ceremonial
- ___ Milling
- ___ Lithic workshop
- ___ Flaking station

Others:

Soil:
Color Grey-brown

Midden? Yes N
Evidence? ___
none apparent

Post holes?
Soil Sorting poor

Deposition? H
degredation of base material

Erosion? How
Water born facilitated by the plowing

Rational for conclusions:
Research potential: good research potential
Types of studies possible: Tool typologies, land use patterns, resource exploitation patterns.
Notes: This site is not actually on the Poway woods property but rather it is on the Rancho Penasquitos property adjacent to it. There may be depth on the Penasquitos side however a check of the rodent burrows did not show this.

Photos? Yes No Film type: ASA: Color Prints Color Slides
Black/White Deposition or film Photos #
Additional notes, drawings on reverse: Yes No

D. NOISE STUDY

NOISE STUDY

FOR

POWAY WOODS

WESTEC Services, Inc.
1520 State Street. Suite 240
San Diego, California 92101

August 6, 1976

Prepared for:

Grabhorn Engineering Corp.
7364 El Cajon Blvd., Suite 206
San Diego, California 92115

NOISE STUDY FOR POWAY WOODS

INTRODUCTION

A noise study of the proposed Poway Woods subdivision was made to determine existing and future noise levels on-site and to investigate the need for noise mitigation on the property. The property consists of approximately 49 acres and is located along Pomerado Road in the Community of Poway, San Diego County. The property is bisected by the proposed prime arterial Camino del Norte (SA 680).

ANALYSIS

Existing Noise Levels

Existing noise levels were determined along Pomerado Road in accordance with the methodology developed by Wyle Laboratories (1973). The procedure establishes a day-night average sound level (L_{dn}). The term L_{dn} is a currently accepted criterion for evaluating traffic noise.* The distance of a noise contour from the roadway depends upon the following variables: average daily traffic (ADT), vehicle speed, number of lanes, percentage of trucks, gradient of roadway, the degree to which the roadway is elevated or depressed, and the surrounding topography.

*Another commonly utilized measure of the cumulative noise exposure in the community is the Community Noise Equivalent Level (CNEL). It differs from L_{dn} in its treatment of evening noise occurences. CNEL and L_{dn} will normally agree within 1 dB. For practical purposes they may be considered synonymous.

Based on the existing ADT of 8,500 (4% trucks), the L_{dn} 65 dB contour is situated 70 feet from the centerline of the outermost traffic lane. The L_{dn} 60 dB contour extends 155 feet into the property; the L_{dn} 55 dB contour extends 380 feet into the site. Where the home pads are elevated 30 feet above the roadway such as at lot 102, the theoretical contours are substantially reduced*: L_{dn} 65 = 70', L_{dn} 60 = 88', and L_{dn} 55 = 120'. Accordingly, lots 2, 55, and 107-108 would be exposed to backyard noise levels $\geq L_{dn}$ 60 dB. Lots 1 and 56 would be exposed to a noise level in mid-yard of L_{dn} 65 dB.

1995 Noise Levels

By 1995, Pomerado Road is assumed to be a four-lane roadway carrying an ADT of 27,000. Calculated with the Wyle methodology (1973 case-graphs), the following contour widths were developed for Pomerado Road:

	Level Terrain	30' Elevated Home Sites
L_{dn} 65 dB	125'	85'
L_{dn} 60 dB	300'	100'
L_{dn} 55 dB	700'	250'

The Regional Transportation Plan, as adopted by the Comprehensive Planning Organization, March, 1975, shows SA 680 (Camino del Norte) to be an expressway in 1985 and a

*See Tentative Map for lot designations.

freeway extension of State Route 125 in 1995. The 1995 ADT projected for this freeway is 60,000 ADT. However, funds are currently unavailable to purchase freeway right-of-way or to construct SA 680. Future funding of these routes is also indefinite at this time. The Department of Transportation has requested that the developer of the proposed project provide a 126 ft. right-of-way along the portion of SA 680 which crosses the subject property. For purposes of this analysis, Camino del Norte is realistically assumed to be carrying an ADT of 40,000 in the 1995 time frame (4% truck mix).

Since most of the lots bordering Camino del Norte are roughly 25 feet or more above the roadway (excepting those lots just off Pomerado Road on 'A' Street), the developed contours were based on the 30' elevated case:

Camino del Norte:	L_{dn} 65 dB	= 92'
(1995)	L_{dn} 60 dB	= 180'
	L_{dn} 55 dB	= 520'

Accordingly, lots 1, 56, 107-108 will be exposed to noise levels of $\geq L_{dn}$ 65 dB in the 1995 time frame. Lots 2, 55, 82-92 and 109 will be exposed to noise levels of $\geq L_{dn}$ 60 dB. Lots 99 and 100 will be exposed to noise levels $< L_{dn}$ 60 dB.

Discussion

The Noise Element of the San Diego County General Plan (County of San Diego, 1976) requires that noise levels throughout the property meet the standards (Policy 4b) presented in Table 1. Existing noise contours along Pomerado Road were established earlier in this report. As residential areas along Pomerado Road are currently exposed to noise levels of $\geq L_{dn}$ 65 dB (lots 1 and 56), post-development noise levels must be less than 65 dB(A) to meet the "acceptable" level as designated in Table 1 and to be in accordance with the County General Plan Noise Element. Thus, those lots which will be exposed to noise levels $\geq L_{dn}$ 65 dB must incorporate noise attenuation measures to meet the aforementioned criteria. Lots which will require noise mitigation include 1, 56, and 105-108. No mitigation will be required for the remaining lots for reasons of adequate setback, elevational differences between the home pads and the roadways, or line-of-sight blockage.

The developer has proposed the use of a 4 foot earthen berm at the rear or sides of home pads which require noise mitigation. A 4 foot berm would adequately attenuate noise levels to L_{dn} 65 at lots 1, 56, 105, 106, 107 and 108 by blocking visual contact with the roadway (assuming the vehicular noise source average height is 4 feet off the ground)

TABLE 1

DEVELOPMENT STANDARDS: NOISE

	Residential Areas Where Preexisting Noise Levels Are CNEL 55 or Less	Residential Areas Where Preexisting Noise Levels Are CNEL 56 - 64	Residential Areas Where Preexisting Noise Levels Are CNEL 65 or Greater
Acceptable	CNEL < 55 dB(A)	CNEL < 60 dB(A)	CNEL < 65 dB(A)
Normally Unacceptable	CNEL = 55/75 dB(A)	CNEL = 60/75 dB(A)	CNEL = 65/75 dB(A)
Unacceptable	CNEL > 75 dB(A)	CNEL > 75 dB(A)	CNEL > 75 dB(A)

resulting in a noise reduction of 5-8 dB(A) at the receiver (5 foot height situated in mid-yard).

It is noted that these attenuation factors are predicated on the assumption that the barrier is continuous (i.e., angle subtended from receiver point to barrier is 180°). Where the barrier is broken between street intersections (i.e., where Heath Drive and 'A' Street intersect with Pomerado Road) the maximum attenuation will drop significantly for those lots bordering the intersections; this includes lots 1, 56, 106 and 107. To mitigate this problem, the barriers along Pomerado Road for these lots should be continued around the corner onto Heath Drive and 'A' Street approximately 50 feet into the project area.

CONCLUSION

Six lots of the proposed subdivision will be exposed to "unacceptable" noise levels unless mitigating measures are taken. These lots (1, 56, and 105-108) are all situated along Pomerado Road.

Noise attenuation by a 4 foot earthen berm as proposed by the developer will resolve the noise problems at all of these lots.

REFERENCES CONSULTED

Bolt, Beranek and Newman, Inc., Fundamentals and Abatement of Highway Traffic Noise., prepared for Federal Highway Administration. Contract No. DOT-FH-11-7976, June 1973.

County of San Diego, Noise Element of the San Diego County General Plan (Part VIII), Environmental Development Agency, Planning Department, January, 1975.

Wyle Laboratories (Jack Swing), Development of Ground Transportation Systems Noise Contours for the San Diego Region, prepared for Comprehensive Planning Organization of San Diego, Wyle Research Report WCR 73-8, December, 1973.

E. MISCELLANEOUS CORRESPONDENCE

July 22, 1976

Mr. Jon Shakespeare, President
San Marcos Development Company
1140 Union Street
San Diego, California 92101

Dear Mr. Shakespeare:

Having studied your proposed project in Poway (Casa Real #7), we wish to take this opportunity to express a position on the need for "moderate-priced" housing in the Highway 395 corridor and your ability to produce a home for under $50,000 in that area.

It is widely acknowledged that fewer than 15% of San Diego's households can afford a home priced $50,000 or above. In fact, with a County-wide median income of $11,000 (1975 Special Census), the average household cannot afford a home priced over $30,000.

In light of the inability of the vast majority to afford homes priced over $50,000, it is imperative that the local governmental bodies encourage development of "moderate priced" housing.

At the present time, the average selling price of a new subdivision home in the area North of Highway 8 is approaching $60,000, and increasing at a rate of $500-$600/per month.

To our knowledge, there are only four subdivisions in the 395 corridor between Highway 8 and Rancho Bernardo that have homes priced under $50,000. And two of those four -- Shadow Hills and Mira Mesa North -- are essentially sold out. The remaining two, Avco's 64-units in Poway and Three Seasons 124-units in Penasquitos, will initiate construction shortly. Homes in these four subdivisions are generally priced in the $40,000-$50,000 range.

The reason why new homes have accelerated to this price level relates primarily to the increased price of improved lots. In 1971, improved lots sold for $7,000 in the 395 corridor. Today, the price

is approaching $20,000 -- three times the price five years ago. The cost increase is due almost entirely to the government imposed development moratorium--a situation that has created a "black market" in lots.

Because of the lot approval slowdown, the County has found itself in a critical housing shortage. The County has the ability to absorb 25,000 housing units annually, (and did in fact absorb that many in the 1969-1974 period), but in 1974-1975 and now in 1976 is falling very much short of that production level. The result of the shortage is a present deficit of 30,000 housing units -- a deficit evidenced by a near "0" rental rate and complete absence of sale housing inventory.

Because of the new home shortage, the price of resale housing has skyrocketed. As of last week, the average price of a three bedroom home listed in the Escondido Multiple Listing Service was $63,949 and the average four bedroom $74,469. Similar prices were noted in the San Diego Multiple Listings.

On balance then, the County is on the verge of a major housing crisis--a situation parallel to that of the World War II shortage.

It is therefore unthinkable, in our minds, that the County would even consider denying your company the opportunity to build housing priced under $50,000.

After all, one of America's greatest virtues has been its ability to afford every citizen the opportunity to own his or her own home. And if that opportunity is denied, then America will lose much of its glory, personal strength and psychological contentment.

We mourn the imminent passing of the single family home and look with troubled eyes at those who hasten its demise, for they are gravely wounding America.

Sincerely,

SANFORD R. GOODKIN RESEARCH CORPORATION

Alan N. Nevin, Vice President

BIOGRAPHICAL SKETCH

ALAN N. NEVIN

Alan N. Nevin is Senior Vice President of the Sanford R. Goodkin (Good-kin) Research Corporation. The Goodkin organization is considered to be among the nation's leaders in the field of housing economics.

Mr. Nevin has, for the past five years, concentrated on the economics of housing supply and demand in California, and as a long-time resident of San Diego, has taken a special interest in the housing needs of this community.

Mr. Nevin has recently completed a series in the San Diego Tribune on the problems of growth in San Diego. He also serves on the Growth Management Committee of the San Diego Chamber of Commerce and recently conducted a seminar series on the implications of Growth Management for the City of San Diego Planning Department.

SAN DIEGO MUSEUM OF MAN

1350 El Prado, Balboa Park, San Diego, California 92101, Telephone (714) 239-2001

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: Grabhorn Engineering Corp. - Richard G. Grabhorn

Date of Request: 10 March 1976 (X)Letter ( )Telephone ( ) In Person

Date Request Received: 11 March 1976 (X)Map Received (X)Map Returned

Name of Project: Poway Woods, WO: 108-006

( ) The Museum of Man files show no recorded sites for the project area.

(X) The Museum of Man files show the following sites ( )within (X)in the vicinity of the project area.

Site No. W-461 Culture(s): San Dieguito II, "Amargosa"

Description: Milling station with grinding slicks, cobble chopper, mano fragments, flakes and flake tools (recorded by Ryzdynski/May).

Site No. W-590 Culture(s): Kumeyaay

Description: Camp site with manos, mano fragments, flakes, and sherds (recorded by Carrico).

Site No. W-618 Culture(s): San Dieguito

Description: Scatter of flakes, flake fragments, and 1 core (recorded by Carrico).

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

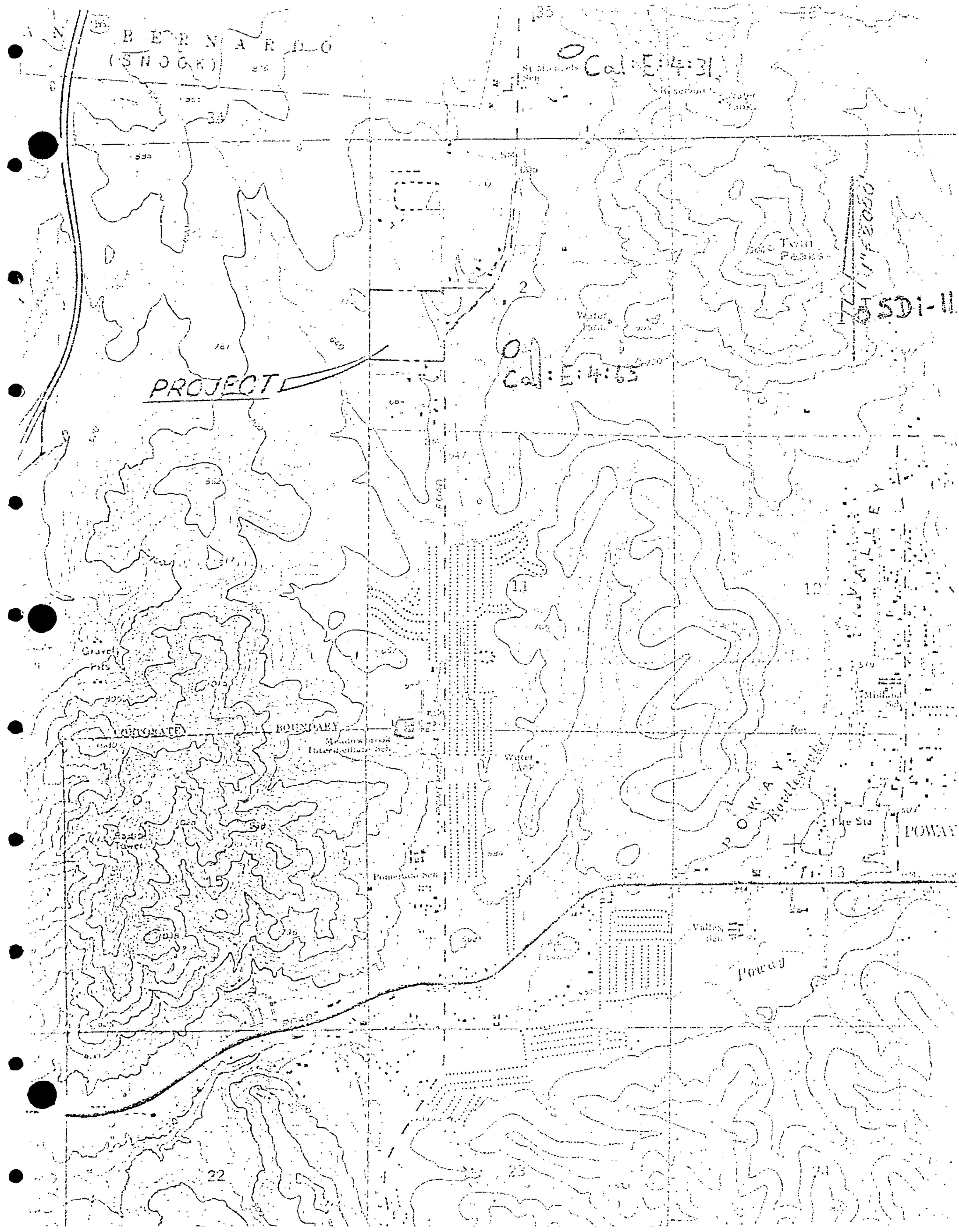
Please note: The project area may contain archaeological resources in addition to those noted above. This report is made from San Diego Museum of Man files only and may not include data pertaining to localities other than those covered in previous Museum of Man surveys or gathered by other institutions or by individuals.

Record check by: Grace Johnson

Date: 12 March 1976

Signed: Lowell E. English

B E R N A R D O
(S N O O K)
34
W-590
Twin Peaks
2
W-618
Water Tank
PROJECT
W-46
11
12
Gravel Pits
CORPORATE BOUNDARY
Meadowbrook Intermediate Sch
Water Tank
Midland Sch
P O W A Y
Rattlesnake
VALLEY
Radio Tower
15
Pomerado Sch
14
Fire Sta
POWAY
13
Valley Sch
Poway
ROAD
22
23



B E R N A R D O
(S N O O K)
Cal:E:4:31
Reservoir
Water Tank
Twin Peaks
2
Water Tank
Cal:E:4:65
SDI-11
PROJECT
11
12
Gravel Pits
CORPORATE
BOUNDARY
Meadowbrook Intermediate Sch
Water Tank
Midland Sch
P O W A Y
Rattlesnake
Fire Sta
POWAY
Radio Tower
15
14
13
Pomerado Sch
Valley Sch
Poway
ROAD
22
23
24

SAN DIEGO STATE UNIVERSITY

Department of Anthropology 5402 College Avenue/ San Diego, California 92182

REPORT ON ARCHAEOLOGICAL SITE FILES RECORD SEARCH

Source of Request: Grabhorn Engineering Corp.

Date of Request: March 10, 1976 (x) Letter ( ) Telephone ( ) In Person

Date Request Received: March 15, 1976 (x) Map Received (x) Map Returned

Name of Project: Poway Woods

( ) The San Diego State University files show no recorded sites for the project area.

(x) The San Diego State University files show the following sites ( ) within (x) in the vicinity of the project area.

Site No. SDi-11 Culture(s): unknown

Description: pictographs on boulder, elev. approx. 750'

Site No. Cal:E:4:31 Culture(s): Protohistoric unknown

Description: 2 acre surface: manos, flakes, Tizon brownware pot sherds: site almost certainly has been destroyed by construction

Site No. Cal:E:4:65 Culture(s): possibly San Dieguito

Description: 50' X 60' surface: heavily patinated large flakes (site discovered & reported by R. Carrico of WESTEC Services)

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

Site No. _____ Culture(s): _____

Description: _____

NOTE: This report includes only that information available from the San Diego State University files and may not include data on file at other institutions. A lack of sites recorded in our files cannot be taken as assurance of the absence of archaeological materials. If it should occur that any cultural remains are encountered during the course of construction, a qualified archaeologist should be notified.

Record check by: _____

Date: March 15 1976

Signed: _____

STATE OF CALIFORNIA—BUSINESS AND TRANSPORTATION AGENCY

EDMUND G. BROWN JR., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 11, P. O. BOX 81406, SAN DIEGO 92138

May 4, 1976

11-SD-15
PM 17.4
Poway Road

Richard G. Grabhorn, P.E.
Grabhorn Engineering Corp.
7364 El Cajon Blvd., Suite 206
San Diego, CA 92115

Dear Mr. Grabhorn:

RE: Poway Woods/Vista de Colina

In response to your letter of April 19, 1976, and the telephone discussion on April 30, 1976, the following information is furnished for Route I-15 at Poway Road.

1. Present two-way Average Daily Traffic (ADT) and peak hour volumes at:

		Peak Hour	ADT
A.	I-15, South of Poway Rd.	4500	50,000
B.	I-15, North of Poway Rd.	3150	37,000
C.	Poway Rd., East of I-15	1800	19,000

2. 1995 two-way Average Daily Traffic (ADT) and peak hour estimates at:

		Peak Hour	ADT
A.	I-15, South of Poway Rd.	9200	89,000
B.	I-15, North of Poway Rd.	6300	63,000
C.	Poway Rd., East of I-15	2900	26,000

The traffic estimate in item 2 above is based on the adopted Regional Transportation Plan, RTP, developed by the Regional Planning Body, Comprehensive Planning Organization, CPO. The Plan for 1995 includes new highway routes in the Poway area (Route 125 and County Route 680). Route 56 does not appear in the adopted RTP.

We hope the above information will assist you in the environmental review phase of the proposed subdivision.

Sincerely,

Jacob Dekema
District Director of Transportation

By

John E. Rising
Chief, Systems Planning Branch

WMB:jd

POMERADO COUNTY WATER DISTRICT

P.O. BOX 785 POWAY, CALIFORNIA 92064
13202 POWAY ROAD PHONE: 748-3935
ORGANIZED JULY 18, 1957

March 9, 1970

County of San Diego
Dept. of Public Health
1600 Pacific Highway
San Diego, California 92101

Gentlemen:

Re: Parcels 314-34-5/6/7/8
314-37-7
OWNER: SIEMONSHA, Harry C. & Anna L.

Sewer service for the reference property can be provided from a main line east of Pomerado Road. Service is contingent upon developer designing and constructing a connecting extension in accordance with District's specifications, and payment of applicable fees. Recommend an engineering study be accomplished prior to any construction. As of the date of this letter sewer service can be provided for the property.

This statement of availability is premised on current criteria. It is not a representation expressed or implied that the Pomerado County Water District will furnish sewer service at a future date.

Applications for service are governed by separate and distinct proceedings and are subject to compliance with the rules and regulations of the District and provided this project is completed within the time limit established by the District under presently applicable criteria.

This statement of availability is applicable only to this project and is not transferrable or assignable to any other project.

Very truly yours,

POMERADO COUNTY WATER DISTRICT

J. R. Mendelson
Assistant Manager

JRM/d

LESTER J. BERGLUND
SUPT. - WATER DEPT.

WILLIAM B. BOND
CHIEF - FIRE DEPT.

Poway Municipal Water District

POST OFFICE BOX 348
12324 OAK KNOLL ROAD
POWAY, CALIFORNIA 92064
748-1114 271-5010
AREA CODE 714

March 12, 1976

County of San Diego
Public Health Department
1600 Pacific Highway
San Diego, California 92101

Subject: Water Availability
Property: Assessor's Tax Parcel #314-37-01, 314-34-05, 06, 07 and 08
Location: Pomerado Road and La Manda Drive, Poway
Approximate No. and
Type of Units: One 8.06 acre, three 9.41 acre and one 9.42 acre parcels

Gentlemen:

The above referenced property is within the Poway Municipal Water District

Water will be available at a minimum of 25 P.S.I. under normal operating conditions, upon completion of all necessary facilities including required offsite lines, upon payment of all required fees and charges, upon execution and performance of all required agreements, and upon compliance with all applicable laws including the California Environmental Quality Act of 1970.

This letter does not constitute or shall it be construed as District's commitment or agreement to furnish any water to said property. Such commitment, if and when made, will be made by District's Board of Directors only upon proper application and in accordance with and subject to all of District's then applicable rules, regulations, ordinances, and procedures including those relating to fees and charges. the California Environmental Quality Act of 1970 and developer construction of required onsite and offsite facilities, and only if District then has the capacity to serve.

Very truly yours,

POWAY MUNICIPAL WATER DISTRICT

Harry Barber, General Manager

HB:LB:mr
cc: Grabhorn Engineering

LESTER J. BERGLUND
SUPT. - WATER DEPT.

WILLIAM B. BOND
CHIEF - FIRE DEPT.

Poway Municipal Water District

POST OFFICE BOX 348
12324 OAK KNOLL ROAD
POWAY, CALIFORNIA 92064
748-1414 271-5019
AREA CODE 714

March 19, 1976

Grabhorn Engineering Corporation
7364 El Cajon Boulevard, Suite 206
San Diego, California 92115

Subject: Poway Woods, Pomerado & La Manda, 120 units on 45.71 acres

Gentlemen:

The information you requested for your environmental analysis study on the above mentioned development is as follows:

1. This development is located approximately 3.8 to 4.0 miles from Fire Station No. 1 on Community Road. The response time into the area would be approximately 6 minutes.

2. The Poway Fire Department is staffed by 24 paid personnel consisting of 3 chief officers, 1 clerk and 20 firefighters, backed up by 30 reserve firefighters on a call basis. Station I is currently manned by 5 firefighters with 2 more projected in 1977-78 to upgrade the level of service.

3. We man two stations in which we house the following equipment:

   Station I: One 1975 Class A 1250 GPM Mack Pumper
   One 1961 American LaFrance 750 GPM Class A Pumper
   One surplus pumper used for rescue purposes
   One 1971 Ambulance
   One Surplus Military 10-wheeler converted for grass and brush firefighting

   Station II: One 1964 American LaFrance 750 GPM Class A Pumper
   One 1960 GMC Reserve 750 GPM Pumper
   One Military Surplus 10-wheeler converted for grass and brush firefighting

   NOTE: All personnel are trained as Emergency Medical Technicians.

The area in which this development is being considered is in a Class 9-13 according to the ISO's latest mapping. The Fire Department is a Class 6.

We have one concern on the project, as with all new developments, and that is that the fire protection facilities be in and in service prior to delivery of any combustibles to the project site.

If we may be of further assistance, or you have any further questions, please feel free to contact us.

Yours truly,

POWAY FIRE DEPARTMENT

Bill B. Bond, Chief

L. E. Wills, Fire Marshal

BBB:LEW:mr

POMERADO COUNTY WATER DISTRICT

P.O. BOX 785 POWAY, CALIFORNIA 92064
13202 POWAY ROAD PHONE: 748-3935
ORGANIZED JULY 18, 1957

August 1, 1976

Gentlemen:

As you may know, Governor Brown recently signed a law which authorized water districts to develop and implement programs of water conservation and to require the utilization of reasonable devices which will accomplish this purpose. As this District has long been a proponent of water conservation as an immediate way to both support environmental concepts and provide a monetary savings to our customers, we have developed a program for the Poway area with which we would like to make you familiar.

After examining the water-saving devices readily available on the market, and comparing the cost between standard plumbing fixtures and water-saver models, we have revised our Ordinance to require as of August 1, 1976 that all new construction in Poway utilize only water-saver type toilets and water dispensing fixtures. A variety of shower heads, faucets and toilets are locally available, in a variety of designs and colors, which are priced competitively with standard fixtures. I am enclosing some information on these devices for your examination. A few sources of these fixtures are listed below, although many other firms also can provide them.

San Diego Pipe & Supply Co.
5150 University Ave., San Diego
Phone: 282-8154

Lord-Babcock
4533 Mission Gorge Pl., San Diego
Phone: 283-5471

Standard Plumbing Supply Co.
3864 - 40th St., San Diego
Phone: 283-2266

We expect that utilization of water-saver fixtures will reduce waste water generation in the Poway area by up to 100 million gallons annually and provide savings up to $15.00 annually for each customer. As we realize that you complete your purchasing arrangements far in advance of any construction, this information is being sent to you so that you may complete your purchase contracts in sufficient time.

If I can be of any assistance to you in this matter, please contact me.

Joseph R. Mendelson
Assistant Manager

POWAY UNIFIED SCHOOL DISTRICT

13626 TWIN PEAKS ROAD · POWAY, CALIFORNIA 92064
(714) 748-0010 – 278-5880

DR. ROBERT L. REEVES
SUPERINTENDENT OF SCHOOLS

OFFICE OF FACILITIES AND FINANCE
Albert J. Abbott, Director

March 22, 1976

Mr. Richard Grabhorn
Grabhorn Engineering Corporation
7364 El Cajon Blvd., Suite 206
San Diego, California 92115

Dear Mr. Grabhorn:

RE: POWAY WOODS

Per your request, we are providing the following information for the referenced development.

We would estimate that the 120 lots will generate approximately 120 children from your development. Approximately 84 of these children would attend the K-5 grade levels, 18 would attend grades 6-8, and 18 would attend grades 9-12.

The following listing provides the current enrollment and capacity at the schools these children would attend:

School	Current Enrollment	Capacity
Pomerado Elementary	647	677
Meadowbrook Middle	1126	1200
Mt. Carmel High	1411	2200

We are unable to provide projected enrollments at this time due to a realignment of attendance boundaries at these schools. This realignment should be completed by May 1, thereby providing the information you are requesting. We are not anticipating increases in the capacities of the schools serving this development. It appears as though your second and fourth questions are redundant regarding the projected enrollments and anticipated growth rate.

If you have any questions regarding this information, please contact us.

Sincerely yours,

A. J. Abbott

A. J. Abbott, Director
Facilities and Finance

AJA:ld

SAN DIEGO COUNTY SHERIFF'S DEPARTMENT
POST OFFICE BOX 2991
SAN DIEGO, CALIFORNIA 92112

JOHN F. DUFFY, Sheriff

March 25, 1976

DONALD R. OLIVER, Undersheriff

Mr. Richard G. Grabhorn
Grabhorn Engineering Corp.
7364 El Cajon Boulevard, Suite 206
San Diego, CA 92115

Dear Mr. Grabhorn:

In response to your letter of March 10, 1976 regarding Poway Woods, WO: 108-006, the following information is provided:

1. The nearest station providing protection to the site is located at 12935 Pomerado Road in Poway and is approximately three miles from this development. The average emergency response time to this location would be approximately 5.5 minutes.

2. The present manning levels at this station are as follows:

Patrol Deputies:	Eight
Detectives:	Two
Sergeants:	One
Stenographer:	One

The proposed manning levels at this station for fiscal 78-79 are as follows:

Patrol Deputies:	Sixteen
Detectives:	Three
Sergeants:	Two
Lieutenants:	One
Stenographers:	Two
Clerk Typists:	One

3. All necessary equipment to provide law enforcement services is presently available at the station and additional equipment will be acquired as needed.

4. This development will have no significant impact on law enforcement services in the Poway area. However, it should be noted that, notwithstanding the minimal impact of this particular development, the aggregate impact of all such developments planned or presently under construction is very significant indeed.

If I can be of further assistance, please feel free to communicate with me at the Poway station Monday through Friday, 8:00 a.m. through 5:00 p.m.

Sincerely,

C.D. Clements, Sergeant
Poway Station

CDC:ss

748-7400
236-3764

ENCLOSURE D

INITIAL GROWTH POLICY COMPATIBILITY MATRIX

Growth-affecting Characteristic	Encourage Urban Development	*Discourage Urban Development	Avoid Urban Development
1. Public Service		Sewer Service	
2. Schools & Community Facilities		Schools	
3. Transportation Access		I-15	
4. Socio-economic Composition	----same----		
5. Natural Hazards		Soil Instability	
6. Natural Resources		Biology	
7. Intensity of Development	Consistent w/Community Plan concerning density		
8. Planned Use		Community Plan designates PRD for Low PRD portion	
9. Resource Impact		Noise Air Quality	

LEGEND

The number(s) following each growth-affecting characteristic indicates the Major Issue(s) in the EIR Discussion which discusses that finding.

Enclosure by parentheses ( ) indicates the project may be acceptable if this factor is mitigated in a manner that will not encourage any further growth.

*This category refers to a current condition relative to present growth and does not indicate unacceptability for future development.

Mitigation Measures

1. Prior to the recordation of the final map, the applicant shall dedicate 126 feet right-of-way along the future freeway Route SA 680 as a condition of project approval.

2. Prior to recording of the final map, the Pomerado County Water District shall obtain additional reserve sewage treatment capacity with the City of San Diego.

3. All design and construction shall be in accordance with the recommendations contained within the Southern California Testing Laboratory, Inc., soils investigation dated May 24, 1973, and the San Diego County Grading Ordinance.

4. Prior to the recordation of the final map, Grading Plans shall be approved by the Department of Transportation. The Grading Plans shall specify that a six foot masonry wall or equivalent shall be constructed along Lots #1, 55, 100 - 107 fronting Pomerado Road and along the rear pad line of Lots #46 - 55 and 81 - 99 fronting future SA 680 to the satisfaction of the Environmental Analysis Division. The limits of the wall to attentuate noise impacts have been delineated by the thick solid line on Figure 1, Enclosure I.

Response to Public Comments

The Public Review period extended from September 24, 1976, to October 25, 1976, during which time one letter of public agency comment and 1 letter of public comment was received.

1. Department of Public Health, received October 19, 1976

   A letter received from the Public Health Department suggests that the present capacity of the Pomerado County Water District be included. A discussion of the Pomerado County Water District capacity with the City of San Diego is contained in Enclosure A, Major Issue #3 of the final EIR.

2. San Diego County Archaeology Society, received October 26, 1976

   A letter was received from Thomas K. Campbell, EIR review chairman for the San Diego County Archaeology Society. He points out the fact that the archaeology report was not included with the draft. It should be clarified that the archaeology report is contained in the Appendix to the draft EIR, submitted to this office under separate cover. The appendix is available to the public and can be obtained from the Environmental Analysis Division.

ENCLOSURE G

COUNTY OF SAN DIEGO

INTER-DEPARTMENTAL CORRESPONDENCE

DATE October 18, 1976

TO: Environmental Analysis Division

FROM: Public Health Department

ADDENDUM TO POWAY WOODS DRAFT EIR - TM 3503

It is suggested that mention be made of the present capacity of the Pomerado County Water District. This could have been mentioned on page 32 of the DEIR. It is suggested that this be included in the final EIR so that the relation of this to proposed loading can be seen.

Norman E Schell IV

NORMAN E. SCHELL
Industrial Hygiene Engineer

NES:jl
cc: G. Quick
J. Melbourn

ENCLOSURE H

San Diego County Archaeological Society, Inc.

P.O. Box 187 · Encinitas, California 92024

October 21,1976

San Diego County Environmental Review Board
Environmental Analysis Division
9150 Chesapeake Drive
San Diego, California 92123

Dear Sirs,

The archaeological report is not included with the draft EIR for Poway Woods, TM3503, Log #76-13-28. We cannot assess the importance of the archaeologist"s findings without reading his report. Will you please recirculate the EIR including the report?

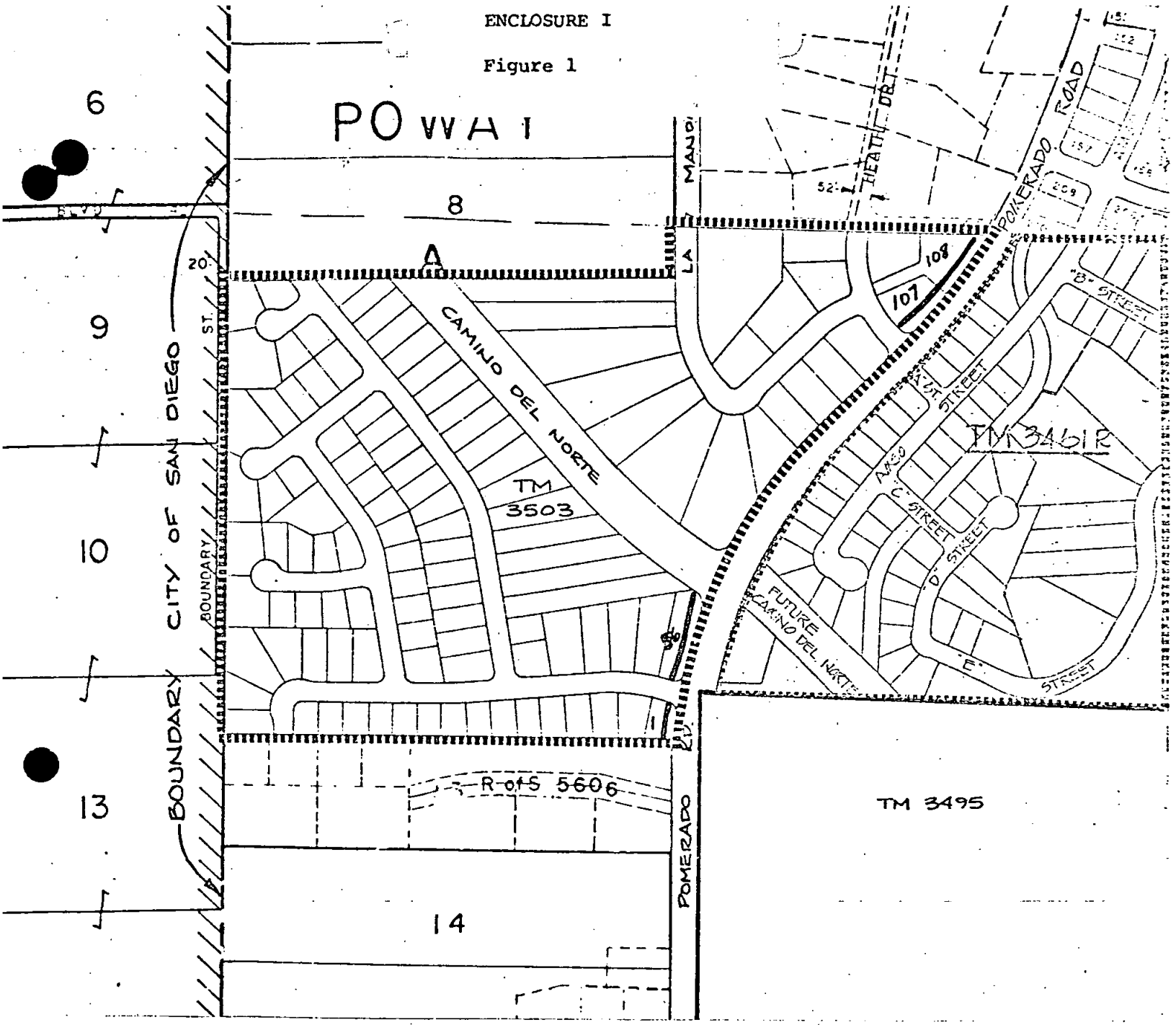
Sincerely,

Thomas K. Campbell

Thomas K. Campbell
EIR Review Chairman

ENCLOSURE I

Figure 1



SAN DIEGO COUNTY DEPT. OF L.U.E.R. Telephone 565-5971

PROJECT NAME Poway Woods — DATE RECD 3-29-76

OWNER

ENGINEER Grabhorn Engineering Corp.

ZONING DISTRICT/AREA Poway District No. 40

EXISTING ZONING R-1, R-1-A, E-1-A & (P) R-1-A PROPOSED ZONING R-1 & E-1-A

GENERAL PLAN LAND USE DESIGNATION Estate & Low (PRD) Residential

ACRES 48.8 NO. OF LOTS 114 D.U. 114 D.U./ACRE 2.34

ELEMENTARY SCHOOL DISTRICT Poway Unified

HIGH SCHOOL DISTRICT Poway Unified

SANITATION DISTRICT Pomerado County Water District

[illegible]TION OR WATER DISTRICT Poway Municipal Water District

FIRE DISTRICT None

WITHIN 1/2 MILE OF CITY San Diego 3 MI. San Diego

5 MILES OF MHTL No 1000 YARDS MHTL No THOM. BROS. 32, F-6

PAGE 127 TCA 64003 BOOK 314 PART 340 & 341 [illegible] 11/4

Scale - 1" = 400'

T.M. 3503

R

SUP.